



SITE INVESTIGATION

KCS Lighting Inc – Stonco Lighting Division

**Aka: Keene – Stonco LOC
The Genlyte Thomas Group, LLC
Philips Electronics North America**

**2345 Vauxhall Road
Union
Union County, New Jersey
EPA ID No.: NJD053513644**

Volume I of I

**New Jersey Department of Environmental Protection
Site Remediation Program
Bureau of Environmental Measurements and Site Assessment**

KCS Lighting, Inc. – Stonco Division
2345 Vauxhall Road
Union, New Jersey 07083
EPA ID No.: NJD053513644

Narrative

Maps

- 1) United States Geological Survey Topographic Map – Roselle Quadrangle (1981)
- 2) Township of Union, Tax Map (1982 Base Map)
- 3) Union County – Road Map Google Maps (2011)
- 4) KCS Lighting, Inc. Stonco Division Surrounding Property Map, Aerial Image Base Map (2007)
- 5) Sanborn Fire Insurance Map (1958)
- 6) KCS Lighting, Inc. Stonco Division Site Map w/ AOCs (unknown date)
- 7) EcolSciences, Inc. Ground Water Elevation Maps for Shallow Ground Water – (December 2007)
- 8) EcolSciences, Inc. Ground Water Elevation Maps for Deep Ground Water – (December 2007)
- 9) KCS Lighting, Inc. Stonco Division Boring Location Map, Aerial Image Base (2007)
- 10) Premesco, Inc. TCE in Ground Water Concentrations - 2010 Boring Information and Red Devil 2007 Monitoring Well Sampling Analytical Results
- 11) Five - Mile Radius, Water Withdrawal Points Map, NJDEP, Bureau of Water Supply (December 2010)
- 12) Flood Hazard Map KCS Lighting, Inc. Stonco Division, Inc Aerial Image Base Map (2007)
- 13) Wetlands Map KCS Lighting, Inc. Stonco Division, Inc. NJDOT Roads Base Map (2002)
- 14) Population Map KCS Lighting, Inc. Stonco Division, Inc. NJDOT Roads Base Map (2000 Census Data)
- 15) KCS Lighting, Inc. Stonco Division, Area of Vapor Intrusion Potential, Aerial Image Base; (2007)

Attachments

- A) NJDEP, Division of Responsible Party Site Remediation, Preliminary Assessment Report; October 1, 1999
- B) Home Town Locator. <http://newjersey.hometownlocator.com/zip-codes/data.zipcode.07083.cfm>. United States Census 2000
- C) NJDEP, Division of Hazardous Waste Management Industrial Site Evaluation Element, General Information Notice; May 1, 1998
- D) NJDEP, SA Waste Manifest Chart and NJDEP, Division of Hazardous Waste Management Waste Manifests from Generator NJD053513644 to Specified TSD's Summary of NJDEP Hazardous Waste Manifest Search; 1980 – 2009
- E) Summary of NJDEP Community Right to Know NJDEP Facits Data Base
- F) Site Investigation Report – Genlyte Corporation – Stonco Facility, Attachment 5; October 5, 1999.
- G) NJDEP, Bureau of Field Operations ISRA initial Notices, Letter to Richard Bindelglass, The Genlyte Group Inc; January 18, 2000
- H) Blasland, Bouck & Lee, Inc. Letter to Mr. Charles Salter NJDEP, Bureau of Field Operations ISRA Initial Notice; September 1, 2000
- I) NJDEP, Bureau of Field Operations ISRA initial Notices, Negative Declaration Affidavit, Stonco Lighting; October 2000
- J) NJDEP, Bureau of Field Operations, Letter to Randy Holub, Stonco Lighting Re: No Further Action Letter; October 25, 2000
- K) United States Environmental Protection Agency Region 2 Laboratory Data Reports: Premesco, Inc. September 20, 2010 and KCS Lighting Inc.; September 9, 2010
- L) NJDEP Mobil Lab data package for two soil samples; September 1, 2010
- M) Memo from Steven Hoke, NJDEP, Bureau of Site Assessment – Compounds detected in soil sample from boring B-5; March 21, 2010
- N) EcolSciences, Inc. Monitoring Well and Ground Water Elevation Summary and Ground Water Analytical Data for Deep Overburden Monitoring Wells; December 24, 2007
Ground Water Elevation Maps for Shallow and Deep Ground Water; June 2004, August 2004, April 2005, May 2005 and November 2007
- O) EcolSciences, Inc. Monitoring Well Diagrams; December 3, 2007

- P) NJDEP, Bureau of Environmental Measurements and Site Assessment, Premrefco, Inc. Site Investigation Report; March 2011
- Q) NJDEP, Bureau of Site Assessment Site Investigation Report, Durex, Inc.; May 1992
- R) NJDEP, Bureau of Environmental Measurements and Site Assessment Memo to File (July 2009) and Descriptions of Water Systems for the NJ American Water Company Raritan Water System, South Orange Water Department, Orange City Water Company, and the NJ American Water Company Short Hills Water System; January 2011
- S) NJDEP Environmental Concerns Tracking Sheet – Amerace Corporation – ESNA Division Harvard Industries; 1999 and NJDEP Letter to David Farer, Farer Fersko Re: No Further Action Letter; May 5, 1999
- T) United States Department of Agriculture Natural Resources Conservation Service New Jersey 24 Hour Rainfall Frequency Data; October 2008

Narrative

SITE INVESTIGATION REPORT

PART I: GENERAL INFORMATION

Site Name: KCS Lighting Inc Stonco Lighting Division

Aka: Keene – Stonco LOC

The Genlyte Thomas Group, LLC

Philips Electronics North America

Address: 2345 Vauxhall Rd.

Municipality: Union **State:** New Jersey **Zip Code:** 07083

County: Union

EPA ID No.: NJD053513644

Block: 5609

Lot(s): 32, 34, 35

Latitude: +40.708703

Longitude: -74.274845 (decimal)

40 ° 42'31"

-74 ° 16'29" (ddmmss)

USGS Quadrangle: Roselle

Acreage: 10.09

SIC Code: 3646

Block 5609 Lot 35.01

Current Owner: Genlyte Group

Mailing Address: 2345 Vauxhall Rd.

City: Union

State: NJ

Zip Code: 07083

Telephone No.: (908) 964-7000

Operator: Same

Owner/Operator History:

NAME	OPERATOR/ OWNER	DATES	
		FROM	TO
The Estate of Caroline A. Foster	Owner	Pre-1857	9/27/39
Leandro Gallini and Evelyn Gallini	Owner	1939	1953
A.P.W. Products, Hazel Bishop Co./ J.L. Hammett Company	Operator Owner	1953	1979
Stonco/Keene Corporation	Operator/Owner	8/31/79	7/31/84
Stonco/KCS Lighting, Inc	Operator/Owner	7/31/84	8/19/92
Stonco/The Genlyte Group, Inc.	Operator/Owner	8/19/92	2008
Stonco/Philips	Operator/Owner	2008	Present

The main building on the KCS Lighting, Inc. Stonco Division (Stonco) property (site) was constructed by the J.L. Hammett Company in 1953. During their ownership, the property was operated by A.P.W. Products Co. Inc. (A.P.W.) and later by the Hazel Bishop Company. A.P.W. was a paper goods manufacturer. The Hazel Bishop Company took over the operations from A.P.W. toward the early 1960's. Hazel Bishop was a chemist who developed the first smudge-proof lipstick and operated her own cosmetics manufacturing firm on the subject property. The J.L. Hammett Company sold the property to the Keene Corporation in 1979. KCS Lighting Inc. acquired the assets of Keene Lighting Products divisions of Keene Corporation in July 1984. KCS Lighting, Inc. was merged into the Genlyte Group, Inc. in June 1986, with property ownership transferred in August 1992. The facility was operated by the Stonco Lighting Division (Stonco) from 1979 to 2008, when Philips Electronics North America (Philips) took ownership. Stonco is currently listed as a Philips Group Brand. (Attachment A) According to the Philips Project Manager for the site, Stonco ceased operations on April 1, 2011 and maintained a crew of 12 employees to oversee the removal of the equipment.

Surrounding Land Use (zoning, adjacent properties): Stonco operated their manufacturing facility on a 9.35 acre property owned by Genlyte Group (Block 5609 Lot 35.01) (Maps 1 and 2). Adjacent to the Stonco facility on the southeastern border is the Lincoln Technical Institute which provides training for young adults in a variety of vocational skills. Southwest of Stonco is Vauxhall Road across from which are the Hickory Manor Condominiums where a major manufacturing plant called Harvard Industries used to be located. Sharing the northwestern property boundary is a building labeled Tessler and Weiss. The NJDEP, Bureau of Environmental Measurements and Site Assessment (SA) recently completed a Site Investigation Report (SI) at Tessler and Weiss, a.k.a Premrefco/Premesco (SI is named Premrefco, Inc.) Also, northwest of Stonco, is a facility operated by Federal Express. The Federal Express facility arranges the distribution of packaging and cargo and maintains their truck fleet. Oliner Fibre, a manufacturer of industrial paperboards, plastics, and products for the heat sealing and loose leaf industries, is located to the northeast of the Stonco Facility. A review of NJDEP Right to Know files and Hazardous Waste Manifesting information revealed that Oliner Fibre did not use hazardous materials nor generate hazardous waste. (Maps 3 and 4)

Distance to Nearest Residence or School: A residence is located less than 150 feet southeast of the Stonco Facility (Map 3)

Direction: Southeast

Population Density (residents per square mile): 5,786 (Attachment B)

PART II: SITE OPERATIONS

Discuss all current and past operations at the site. Include a description of the buildings or structures on site and their physical condition. In addition, tabulate all areas of concern (AOC) and provide the waste source type for each AOC. Include the physical state of waste at each AOC as stored or disposed, the condition of containers and the presence or absence of secondary containment and the volume of waste stored or disposed, or the volume or area of contaminated soil or water.

The following historical information was obtained from a NJDEP Industrial Site Recovery Act (ISRA) submission by Stonco on May 1, 1998. The submission (ISRA Case #E1998203) was made because The Genlyte Group Inc. was attempting to transfer their property and assets to the Genlyte Thomas Group, LLC. Besides the General Information Notice (Attachment C) Stonco submitted a Preliminary Assessment Report and a Site Investigation Report. Information concerning Stonco's recent operations was obtained through a site visit and interviews with plant personnel.

The Stonco site was undeveloped until the main building was constructed in 1953. The J.L. Hammett Company, who also had operations in the nearby Fed Ex Building, initially owned the site building, but it was operated by A.P.W. Products. (Map 5) Both companies were involved in paper goods manufacturing. In approximately 1960, a cosmetic company called Hazel Bishop operated at the site. Hazel Bishop was a chemist who developed the first smudge-proof lipstick. She started her own cosmetics firm and produced water-based lipstick and toothpaste at the site. The company utilized a railroad siding formerly located on the northeastern portion of the subject property for transportation. The siding is inactive. Details of Hazel Bishop operations were not available. (Attachment A)

Records indicate that Stonco has operated at the site from 1979 to the present. Current employees at Stonco were not familiar with the historical operations of the plant. Operations at the plant include the administrative, manufacturing and warehousing operations related to the manufacture and distribution of lighting products and components, particularly outdoor and industrial housings and components. Supplies, parts and electronic components are delivered to the receiving area and either stored in the receiving areas or moved to other storage areas located near the assembly areas.

Stonco assembled a variety of lighting fixtures and characterized their main work as light assembly with drilling and minor tapping. Stonco does not fabricate parts, but a portion of their current operations involves the finishing of premade cast lighting housing. The housing boxes are finished in a closed system where they are powder coated using dry electrostatic deposition with baking enamel. Some items requiring minor machining or custom coating are sent to machining areas or to the wet paint room. Light housings and components are assembled on lines and stored on pallets. (Attachment A)

Prior to 1985, Stonco had a wet paint finishing process. Hazardous waste manifests confirm that wastes F001 and F002 (spent solvents) were last shipped out of Stonco in 1985, and a different waste stream was manifested after 1985. (Attachment D) A site map of the Stonco Facility prepared in 1998 in support of Stonco's ISRA Application, identifies areas where chemicals and hazardous wastes were once stored. (Map 6) SA obtained New Jersey Right to Know information for the Genlyte Stonco facility and summarized the solvent use from 1992 to 2008. (Attachment E) In it, the use of TCE and TCA was documented from 1992 to 1997. The reports indicated that ten gallons were on site every day and the use was in the machine shop. It is possible that the solvents were used in a closed parts washing system. NJDEP also obtained waste manifests from the NJDEP, Bureau of Hazardous Waste Management. The manifests confirmed that waste code F001 – spent halogen solvent and sludge degreaser – were shipped from Stonco between 1982 and 1985. (Attachment D)

During the 1990's, operations at Stonco resulted in recyclable trash (scrap metal, cardboard, paper, wooden pallets, etc.), general trash, municipal refuse and hazardous wastes that were

disposed through certified haulers or recyclers. A compactor was used to consolidate recyclable paper products, and a dumpster for municipal trash was located near the hazardous waste storage area. (Map 6) All waste chemicals and residuals associated with the painting process, part machining, equipment cleaning and maintenance were reportedly handled and managed as hazardous waste. Wastes manifested after 1985 included liquid chemical wastes, solid chemical waste, spent acids, chromium and lead. These materials were accumulated into drums and stored in the hazardous waste storage areas. All drums were stored within portable secondary containment devices and the full drums were collected by a certified hazardous waste disposal for disposal off site. As of April 1999, there was no record of a hazardous waste discharge. (Attachment A)

During Stonco's operation at the site, waste water discharges were reportedly limited to employee sanitary services, discharges from a pre-paint parts washer and building maintenance. Waste water discharges were made to the sanitary sewer system operated by the Joint Meeting of Essex and Union counties. The pre-paint parts washer incorporated five stages of cleaning including one detergent wash (caustic), two acidic agent rinses and two water rinses. The pre-paint parts washer was periodically cleaned of any non-liquid residues by a certified contractor who properly disposed any residuals offsite. (Attachment A)

As the result of sampling their waste water effluent, Stonco was given an Administrative Notice by the Joint Meeting of Essex and Union Counties on March 10, 1998. The violation was for elevated concentrations of zinc detected in sanitary sewer discharge above permit levels. The violation was resolved when Stonco identified the source of the zinc as residue from the paint hook cleaning process which was being transferred into the parts wash system and then into the sanitary sewer system. The cleaning process was discontinued and there were no further violations. (Attachment A)

Two underground storage tanks (USTs), associated with the boiler room, were formerly located at the Stonco facility. The USTs had capacities of 500 and 10,000 gallons and contained No. 2 fuel oil for the plant boiler. The USTs were removed in December of 1985 and visual reports made during the removal indicated there was no release of heating oil. However, since there were no photographs, monitoring data or sampling data to confirm the soil conditions, Stonco and their consultants, Bousland, Bouck & Lee, Inc., now Arcadis (BBL), conducted soil sampling in the former UST excavations as part of a Site Investigation Report for the site to support their ISRA application. Two test pits were dug in the areas where the two USTs were formerly located and soil samples were collected in support of the UST closure (Map 6). Analysis of the soil samples indicated that total petroleum hydrocarbons (TPH) were detected at a concentration of 21,500 parts per million (ppm) exceeding the NJDEP Soil Cleanup Criteria (SCC) of 10,000 ppm. The same soil sample from which the high TPH concentrations were detected was analyzed for volatile organic compounds (VOCs) +10 library search compounds and tetrachloroethene (PCE) was detected at a concentration of 170 ppb. The PCE concentration was below the NJDEP SCC of 1,000 ppb. It is not known how PCE was introduced to the soil in this area. Consultants for Stonco concluded that since the visibly stained soils were excavated and removed and detected contamination was localized and horizontally delineated, no further action was necessary in relation to the UST excavations. (Attachment F)

Stonco submitted a Preliminary Assessment and Site Investigation Report to the NJDEP, Bureau of Field Operations ISRA Initial Notice Section in 1999. After their review of the report,

the NJDEP had concerns over two items detailed in the report (Attachment G). The first concern was the elevated detection of zinc in a waste water discharge to the public sewer. The NJDEP asked for confirmation that all of the floor drains in the Stonco building discharged into the sanitary sewer. Stonco provided site maps that showed the floor drains were connected to the sanitary sewer line (Map 6)

The second concern resulted from information in the PA/SI Report that confirmed the presence of TPH at 21,500 ppm in sample A-4. The report also stated that because adjacent soil samples were below NJDEP SCC, the elevated concentration of TPH had been delineated horizontally. The NJDEP expressed concern that the soil contamination associated with the test pits was not delineated vertically and confirmed that an NFA would not be issued unless the TPH detection was vertically delineated.

BBL advanced an additional boring in the area where soil sample A-4 was collected. Two soil samples were collected from the soil boring at depths of 10 to 10.5 feet below ground surface (bgs) and 12 to 12.5 bgs from a Geoprobe equipped with split spoon samplers and analyzed for TPH. The results of the analysis indicated TPH concentrations of 121 ppm and 1,720 ppm, respectively and each sample was below the SCC of 10,000 ppm. In addition, a soil sample was collected for VOC analysis at the interval 12 to 12.5 bgs and the analytical result indicated that VOCs were not detected. (Attachment H) After a series of letters addressing minor issues were exchanged between Stonco and the NJDEP, Stonco submitted a Negative Declaration Affidavit to the NJDEP Bureau of Field Operations in October of 2000. The NJDEP followed up with a NFA letter to Stonco also in October 2000. (Attachment I)

SA initiated an investigation of Stonco in early 2010 as part of a regional investigation to identify the source of indoor air contamination at the Hickory Manor Condominiums (condos) located at Vauxhall Road and Swanstrom Place in Union, NJ. (Map 4) In the early 2000's, the condo's were built on property formerly operated by the Amerace Corporation, Division of Harvard Industries/Elastic Stop Nut Division (Harvard Industries). The Harvard Industries facility was a large manufacturing plant that produced parts for the auto industry. Harvard Industries was required to conduct remedial investigations at their facility before they could be issued a No Further Action designation (NFA). After several years of tenant occupancy, trichloroethylene (TCE) was detected in the indoor air of the condos at concentrations exceeding NJDEP Rapid Action Levels. The NJDEP responded by installing sub-slab remediation systems in most of the condo units. Two suspected sources of contamination detected at the condos were Red Devil Inc., located adjacent to and hydraulically upgradient of the condos and Harvard Industries. (Map 4) After many years of environmental investigation and remediation, Harvard Industries was granted a no further action (NFA) designation for its site in 1999 (Attachment J). Red Devil ceased operations at their Vauxhall Road facility in 2001 and future plans call for a separate condominium community to be developed on their site.

Since Stonco is located hydraulically upgradient of the Hickory Manor Condominiums and the use of chlorinated solvents at their plant documented, SA was tasked to investigate Stonco as a suspected source of the TCE detected in the indoor air at the condos. Prior investigations at Stonco included only a limited subsurface investigation related to the USTs and ground water sampling has never been conducted on the Stonco site. As part of the Harvard Industries and Red Devil remedial investigations, monitoring wells MW-24 and MW-24D were installed on the right-of-way of Vauxhall Road in a position hydraulically downgradient of Stonco. Analysis of ground water collected from MW-24 in December 2007 indicated tetrachloroethene (TCE)

concentrations of 230 parts per billion (ppb) and tetrachloroethene (PCE) concentrations of 4 ppb, both exceeding the NJDEP ground water quality standard of 1 ppb. Since the monitoring wells were installed upgradient of the Hickory Manor Condominiums and Red Devil, it has become important to discover the origin of the contamination in MW-24 and 24D in order to remediate the source. (Map 7)

SA toured the Stonco facility on April 29, 2010 and observed the current manufacturing activities. There was no hazardous waste generated at the site and wastes streams consisted of trash and non-hazardous phosphates. There were problems in the past when sampling of the plant sewer effluent indicated elevated concentrations of zinc. These discharges were related to the powder coating process and measures were taken to eliminate the discharge of zinc. Plant personnel also informed SA that Stonco utilized a wet paint process prior to 1985 and that the paints used were water-based. SA identified the area within the Stonco plant where wet painting had occurred and targeted the building's exterior adjacent to the paint area for ground water sampling. SA also toured the remainder of the exterior of the facility to identify any areas of concern (AOCs) and determine locations to advance additional borings for the subsurface investigation.

SA conducted the site investigation in September and October of 2010. SA also conducted a subsurface investigation at Premrefco located adjacent to and northwest of Stonco (Map 4). The two investigations were conducted concurrently because boring locations to assess AOCs at Premrefco were located on the Stonco site. Because ground water flow is in a southwestern direction, SA advanced three borings on the Stonco property to assess ground water conditions adjacent to the Premrefco site. The analytical results of ground water collected from ground water samples collected from the borings indicated concentrations of TCE in the shallow aquifer as high as 670 ppb, 1,1-dichloroethene (1,1-DCE) as high as 310 ppb and 1,1,1-trichloroethane (TCA) as high as 240 ppb. Based upon the current understanding of ground water flow, none of the contamination detected on the western side of the Stonco building, resulted from operations at Stonco. (Maps 7, 8 and 9)

Based on the review of ISRA submittals and the initial site visit, SA developed a work plan which addressed two AOCs. AOC 1 is located in the area where the former USTs were located. (Map 6) Also within the area is a pipe which carried liquid waste materials from floor drains located in the paint storage area and an area where painting occurred. SA advanced boring SB-5 in an attempt to intersect the bottom of the former 10,000 gallon heating oil UST. Based upon elevated readings from a TVA organic vapor analyzer, SA selected two intervals from which to collect soil samples. The intervals were 13 to 13.5 feet and 16 to 16.5 feet bgs. In spite of strong petroleum hydrocarbon odors in the first interval, sample analysis indicated that there were no VOCs detected in either sample. A ground water sample was collected at a depth of 49 feet bgs, near the bedrock interface. Analysis of the sample indicated concentrations of tetrachloroethene (PCE) at 19.9 ppb and TCE at 27.9 ppb. The detection of PCE and TCE in the ground water confirms that a release of the solvents occurred at the Stonco facility. It is possible that the release of the solvents was due to a leaking sewer line.

AOC 2 is located on the eastern corner of the Stonco facility where Stonco stored hazardous waste and chemicals. A railway siding was also located in this area, but it was not used by Stonco and only a partially buried rail remains of the siding. Soil borings SB-2 and SB-3 were advanced in the area and soils samples were collected from each boring based upon screening with the TVA organic vapor analyzer. Soil samples were collected from SB-3 at depths of 4.5 to 5 feet

(SB-3S) and 10.5 to 11 feet bgs (SB-3B). PCE was detected at a concentration of 11 ppb in SB-3B, but there were no other volatiles detected in either sample. Soil samples were not collected from SB-2. Ground water samples were collected from both boring SB-2 and SB-3. In SB-2, TCE was detected at a concentration of 9.7 ppb and PCE was detected at a concentration of 8.7 ppb. In SB-3, TCE was detected at a concentration of 13 ppb and PCE was detected at a concentration of 5.1 ppb. The NJDEP GWQS of 1 ppb for each compound in both borings was exceeded. (Map 6)

AOC SUMMARY TABLE

AOC Name	Source Type	CERCLA Exempt	Physical State	Waste Quantity
Former UST area and floor drain discharge pipe	Other	No	Liquid	Unknown
Area adjacent to hazardous waste storage area	Other	No	Liquid	Unknown

PART III: PERMITS

A. NJPDES

Number	Date Issued	Expiration Date	Formation or Water Body Discharged To
N/A			

B. New Jersey Air Pollution Control Certificates

Plant ID No.:

No. of Certificates: N/A

Equipment Permitted: N/A

C. BUST Registration

Registration No.: USTs were not registered. Closed in 1985.

No. of Tanks: 2

Tank No.	Capacity (gallons)	Contents of Tank	Status
UST 1	500	Heating oil	Removed in 1985
UST 2	10,000	Heating oil	Removed in 1985

D. RCRA Status (TSD, Generator, Protective Filer, etc.) N/A

E. Other Permits (RCRA, NRC, etc.)

Issuing Agency	Permit Type	Permit No.	Date Issued	Expiration Date
N/A				

PART IV: SOIL EXPOSURE

Describe soil type. Include soil series, composition of the soil and permeability of the soil.

The soil type at the site is listed in the Soil Survey of Union County New Jersey as Urban Land.

For each sampling event, identify the sampler and date of sampling and list the name, address and certification number of the lab which performed the analyses. State who conducted the quality assurance review of the data and summarize any data qualifications.

Over the years, two soil sampling events occurred at Stonco. During the first event, soil samples were collected as part of confirmatory sampling during the removal of a UST on the southeastern side of Stonco. The second soil sampling event was conducted by NJDEP, SA as part of this SI.

Stonco reportedly used two heating oil USTs to store fuel to heat the plant up until December 1985 when they were removed. Reporting requirements to document the proper closure of USTs were not required in 1985, but there were reports that visual observations made at the time of the UST closures indicated that the USTs had not leaked. (Attachment F) In 1998, Stonco went through ISRA to effect a trade involving an ownership transition. As part of the ISRA submission, a Site Investigation Report was prepared for Stonco addressing a single AOC which was the area in which the two USTs were removed. Because there was no documentation of soil conditions at

the closing, Stonco and their consultants BBL advanced two test pits in 1999 to assess the areas where the USTs were reported to be located. The areas were selected based on interviews with factory personnel and the presence of a former vent pipe.

Excavation A: 10,000 gallon heating oil UST – In 1999, six soil samples were collected from what was thought to be the UST excavation floor. During the preliminary soil excavation, small areas of dark soil were encountered in random locations in the excavation. BBL screened the dark soils and segregated it for disposal. All six soil samples were analyzed for TPH and two samples were analyzed for VOC+10. The results are summarized in the table below. (Map 6)

Excavation B: 500 gallon heating oil UST – In 1999, two soil samples were collected from what was thought to be the UST excavation floor. The two samples were analyzed for TPH and none were analyzed for VOCs. The presence of darkened soil was not reported. (Map 6)

Information concerning the laboratory used and any Quality Assurance Data was not available.

Sample ID	TPH Concentration (ppm)	VOC Detected	VOC Concentration (ppb)	NJDEP SCC (ppb)	Tentatively Identified Compounds (ppb)
Pit A-1	ND	NA	-		-
Pit A-2	40	NA	-		-
Pit A-3	410	tetrachloroethene	170	1,000	78,200
Pit A-4	21,500	ND	ND	10,000	95,300
Pit A-5	111	NA	-		-
Pit A-6	181	NA	-		-
Pit B-1	ND	NA	-		-
Pit B-2	ND	NA	-		-

ppm – parts per million

ppb – parts per billion

(Att F)

NA – Not Analyzed

ND – Not Detected

VOC – volatile organic compound

SCC – NJDEP Soil Cleanup Criteria

Bolded Concentration – Exceeds the SCC of 10,000 ppm

The analysis of the soil samples indicated that a release from the 500 gallon UST in Pit B had not occurred. In Pit A, however, a TPH concentration of 21,500 ppm was detected in sample A-4 exceeding the NJDEP SCC of 10,000 ppm. BBL reasoned that since soil samples collected on either side of sample A-4 were well below the SCC, the exceedance detected in A-4 was localized. BBL also segregated the dark soil encountered during the excavation and disposed a total of ½ cubic yard of the material. PCE was detected in soil sample A-3 at a concentration of 170 ppb, below the SCC of 1,000 ppb. Because the PCE detection was below the NJDEP SCC, BBL made no mention of its detection in the Conclusion/Recommendation section of the SI. (Attachment F) BBL concluded that:

No further action was recommended at this AOC based on the localized nature of the biased sample (A-4), the absence of VOCs in the sample, and the removal of darkened soil from the

base of the excavation at this location. (Attachment F)

NJDEP responded to Stonco in a letter from the Bureau of Field Operations, ISRA Initial Notice Section dated Jan 2000 (Attachment G) and required that additional sampling be conducted because the TPH detected in soil sample A-4 had not been delineated vertically. In June of 2000, BBL went back to the Stonco facility and advanced a soil boring within the test pit they had formerly dug. They screened soils down to 13 feet and collected soil samples at depths of 10 to 10.5 feet and 12 to 12.5 feet bgs. It is interesting to note that the highest reading on the photoionization detector (PID) used to screen the two sampling intervals was 12.4 ppb. In the interval 11 – 11.5 feet bgs the PID detected 59.4 ppb VOCs but a sample was not collected. The results of the TPH analysis for soil samples collected at 10 to 10.5 feet and 12 to 12.5 feet bgs was 121 ppm and 1,720 ppm respectively, both less than the SCC of 10,000 ppm. Table 2 of the BBL letter report (Attachment H) indicates that soil samples for TPH and VOCs were collected at each of the two sampling intervals. However, in only the interval from 12.0 to 12.5 feet bgs was VOC data reported and it indicated that there were no detectable concentrations of target VOCs. VOCs, if analyzed at all, were not reported in the 10 to 10.5 foot interval. There were no analytical data sheets accompanying the report. Based upon the apparent vertical delineation, BBL recommended no further action for the UST area and NJDEP accepted. (Attachment I)

Tabulate sample numbers and the associated Area of Concern or describe the sample location. Identify samples which establish background conditions.

The second subsurface investigation at the Genlyte/Stonco site was initiated in September 2010. SA advanced nine borings from which 6 soil samples were collected. SA used a Geoprobe duo-core method where soil is retrieved continuously in a clear macro sleeve (tube) and from which a sample is collected. SA described and screened the soil boring with a TVA organic vapor analyzer. One soil sample was collected from each of four borings (SB-1, SB-3, SB-4 and SB-5) and an additional sample was collected from boring SB-3 at a discrete interval. The samples were collected at the intervals where the highest concentrations of organic vapors were detected with the TVA.

Of the 6 soil samples collected from the Stonco AOC's, only soil samples SB-3B and SB-5B had low detections of PCE. In soil samples SB-5A and SB-5B, VOCs related to petroleum were detected. Most of the soil samples were submitted to the USEPA Region 2 Laboratory in Edison, New Jersey and the data was validated by EPA (Attachment K). Soil samples SB-5A and SB-5B were analyzed by the NJDEP Mobil Lab. (Attachment L)

Sample ID	Date/Collector	Depth (bgs)	Area of Concern
SB-1S	9/9/10 - SA	8– 8.5	Upgradient Sample - background
SB-3S	9/7/10 – SA	4.5 - 5	Hazardous waste storage area
SB-3B	9/7/10 - SA	10.5 – 11	Hazardous waste storage area
SB-4S	9/7/10 - SA	10.5 – 11.0	Chemical storage area
SB-5A	9/1/10 - SA	13 – 13.5	UST area and floor drain discharge
SB-5B	9/1/10 - SA	15.5 - 16	UST area and floor drain discharge

(Map 9)

Tabulate contaminants identified in the soil. Include sample number, depth, contaminant levels and corresponding NJDEP Soil Remediation Standard.

Sample ID	Date/Collector	Depth (bgs)	Detected Compounds	Concentration (ppm)	NJDEP SRS (ppm)
SB-1S	9/9/10 - SA	8- 8.5	ND		
SB-3S	9/7/10 - SA	4.5 - 5	ND		
SB-3B	9/7/10 - SA	10.5 - 11	tetrachloroethene	0.011	1
SB-4S	9/7/10 - SA	10.5 - 11.0	ND		
SB-5A	9/1/10 - SA	13 - 13.5	Isopropylbenzene n-propylbenzene 1,3,5,trimethylbenzene 1,2,4 trimethylbenzene Sec-butylbenzene 4-isopropyltoluene naphthalene	0.160 J 0.190 J 0.060 J 1.420 1.520 0.550 1.220	100
SB-5B	9/1/10 - SA	15.5 - 16	tetrachloroethene sec-butylbenzene naphthalene	0.040 J 0.110 J 0.660	1 100

ND – Non-detect

J – Estimated Concentration

SRS – Soil Remediation Standard

(Attachment K, M – MAP 9)

Discuss contaminants identified in the soil above background and remediation standards and provide the rationale for site attribution. State whether Level 1 or Level 2 contamination is present.

During their investigation in September 2010, SA collected soil samples from four borings and while several compounds were detected, none exceeded their NJDEP Soil Remediation Standard (SRS). PCE was detected in soil borings SB-3 (0.011 ppm), which was located in the area where the hazardous waste storage area was formerly located, and in SB-5 (0.040 ppm), where the former USTs and floor drain discharge piping were located. Each detection was far below the SRS of 1 ppm. In 1999, TPH at a concentration of 21,500 ppm was detected during the closure and removal of a heating oil UST in the area of soil boring B-5. The current Remediation Standard for TPH is 10,000 ppm. Based upon these results, a release to soil above background but below the NJDEP SRS has been documented.

Total area of surficial contamination in square feet: N/A

If no soil sampling has been conducted, discuss areas of potentially contaminated soil, areas that are visibly contaminated or results from soil gas surveys.

Soil sampling was conducted.

Number of people occupying residences or attending school or day care on or within 200 feet of the site: 50

Number of workers on or within 200 feet of the site: 150

Number of on-site employees: 50

Identify terrestrial sensitive environments within 200 feet of observed contamination.

None were identified

Determine if any commercial agriculture, silviculture, livestock production or grazing are present within 200 feet of observed contamination.

None were identified.

PART V: GROUND WATER ROUTE

A. HYDROGEOLOGY

Describe geologic formations and the aquifer(s) of concern. Include interconnections, confining layers, discontinuities, composition, hydraulic conductivity and permeability.

Ground water in Union County occurs in the voids of unconsolidated stratified drift deposits of Pleistocene age and in joints and fractures of the Brunswick Formation and Watchung Basalt of late Triassic Age. The Brunswick Formation consists of thin-bedded shale, mudstone and sandstone with color variations of reddish-brown to grey. The reddish-brown color originates from reworked hematite which comprises 5 to 10 per cent of the formation. Minerals of the Brunswick Formation include quartz, illite, muscovite, feldspar and small amounts of calcite and gypsum.

The Watchung Basalt consists of three extensive basaltic lava sheets intercalated with sedimentary rocks of the Brunswick Formation. Two of the three lava sheets occur in Union County form the First and Second Watchung Mountains.

Unconsolidated sediments deposited by glaciers or glacier melt water during the Pleistocene Epoch mantled the bedrock surface in Union County. These glacial till deposits consist of clay, silt, sand, gravel and boulders of glacial, glaciolacustrine or glacial fluvial origin. Aquifer tests conducted on an adjacent property to Premesco showed that permeability values for the dense glacial till overburden ranged between 10-2 cm/sec and 10-5 cm/sec indicating low permeability.

The Pleistocene sediments in the bedrock channels consist of unstratified and stratified clay, silt, sand and gravel. Only the sand and gravel deposits of the stratified drift will yield large quantities of water to the wells.

The Brunswick Formation of Late Triassic age is the major aquifer in Union County. Water occurs in joints and fractures which become progressively tighter and fewer with increasing depth below land surface. The joint and fracture system in which ground water is stored may

intersect each other so that water can move vertically as well as horizontally. Ground water occurs in both confined and unconfined conditions in the Brunswick Formation. Unconfined ground water occurs mainly in upland areas where overlying unconsolidated sediments are thin or absent. In the lowland areas in the southern and eastern portions of Union County, the rocks are mantled by unconsolidated Pleistocene deposits containing silt and clay beds which may confine water in the underlying rocks.

Wells tapping the Brunswick Formation generally draw water from several water-bearing zones. In areas where the rocks are exposed or covered by a thin layer of unconsolidated sediments, the shallow water-bearing zones contain unconfined water to depths between 200 and 300 feet. Wells penetrating to depths between 200 and 600 feet generally have the greatest yields.

A network of approximately 20 monitoring wells was constructed on the adjacent Red Devil property, west of Stonco (Map 10). The total depths of the shallow monitoring wells range between 30 and 40 feet deep and ground water depths average 23 feet below ground surface (bgs). At several of the monitoring well locations at Red Devil, wells were installed to the top of bedrock. These monitoring wells are designated with a 'D' after the well ID number. The depth of the deep wells range between 50 and 70 feet bgs and the ground water depths also average 23 feet bgs (Attachment N)

The ground water flow direction calculated from both the shallow and deep monitoring wells is toward the south-southwest from Stonco toward the Hickory Manor Condominiums. Monitoring well MW-24, located on the Vauxhall Road right-of-way and within several feet of the Stonco site, is the most easterly monitoring well and is located hydraulically upgradient relative to the condos. EcolSciences, the consultants for the Red Devil Property, produced a series of ground water flow direction maps from June 2004 to December 2007. Maps were produced for both the shallow and deep monitoring wells and all except the December 2007 ground water elevation maps are included in (Attachment A). The December 2007 Shallow Ground Water Elevation Map (Map 7) and the Deep Ground Water Elevation Map (Map 8) are included in the Figures Section.

Depth to water table: 25 feet

Depth to aquifer of concern: 25 feet

Depth from lowest point of waste disposal/storage to highest seasonal level of the saturated zone of the aquifer of concern: to be determined: 0 feet, aquifer is contaminated

Thickness and permeability of the least permeable layer between the ground surface and the aquifer of concern: 5 to 25 feet bgs, 10 – 4 cm/sec (fractured shale)

Thickness of aquifer: 10,000 feet

Direction of ground water flow: south-southwest

Net precipitation Factor Value: 6

Karst: No

Wellhead Protection Area within 4 miles of the site: Yes

Does a waste source overlie a Wellhead Protection Area: No

B. MONITORING WELL INFORMATION

Briefly discuss why the monitoring wells were installed.

There are no monitoring wells installed on the subject property. However, monitoring wells MW-24 and MW-24D are located on the northern right-of-way of Vauxhall Road, but are located very close to the western portion of the Stonco property. (Map 9) The two monitoring wells are located several feet apart and are screened at separate intervals. Monitoring well MW-24 is screened at the top of the shallow aquifer and MW-23D is screened near the bedrock interface zone. MW-24 was constructed to a depth of 42 feet bgs with 15 feet of screen at its base. Monitoring well MW-23D (deep) was advanced to 65 feet bgs at the top of the bedrock and screened from 55 to 65 feet bgs. The ground water in this interval was isolated to enable sample collection at the top of the bedrock where dense non-aqueous phase liquids such as TCE and TCA tend to accumulate. (Attachment O) The two monitoring wells were installed by EcolSciences, consultants to ARC Union, LLC, the developers of the Red Devil property, to augment existing information and refine the ground water flow direction at Red Devil. Ground water sampling results on the Red Devil site enabled EcolSciences to conclude that there was an off site source of contamination affecting the ground water quality on their property. (Maps 7, 8 and 10)

Monitoring wells MW-23 and MW-23D were also installed by EcolSciences for the same purposes as MW-24 and MW-24D. The monitoring wells were installed in the northern right-of-way of Vauxhall Road very close to the adjacent Premrefco/Premesco property. Monitoring wells MW-24 and MW-24D are ideally positioned to assess ground water quality hydraulically downgradient of three AOCs on the northwestern portion of the Premesco site including the area where the UST was located, the main operations building and the area in which the former hazardous waste storage shed was located. The construction details of the two monitoring wells may also be found in Attachment O. Monitoring wells MW-25 and MW-25-D were installed by EcolSciences in the main entrance driveway of the Hickory Manor Condominiums, on the southern side of Vauxhall Road. The two monitoring wells are located hydraulically downgradient and approximately 700 feet south of the former UST area and floor drain discharge point on the Stonco property. The two monitoring wells are also located 500 feet south-southwest and hydraulically downgradient of a former hazardous waste storage shed located on the Premrefco/Premesco site.

The following table summarizes the analysis of ground water samples collected from the six monitoring wells installed by EcolSciences for their investigation of the Red Devil site. The monitoring well locations are depicted on (Map 10). The ground water samples were collected in December 2007. (Attachment N). Qa/QC supporting documentation was not available.

Tabulate contaminants identified in each well. Include well number, contaminant levels and corresponding NJDEP Ground Water Quality Standard (GWQS).

SAMPLE #	DATE	Screened Interval (feet bgs)	CONTAMINANT	CONCENTRATION (parts per billion)	NJDEP GWQS
* MW-23	12/07	25-40	trichloroethene	900	1
			tetrachloroethene	4.9	1
MW-23D	12/07	56 - 66	1,1-dichloroethene	11	1
			trichloroethene	350	1
* MW-24	12/07	27 - 42	trichloroethene	230	1
			tetrachloroethene	4.0	1
MW-24D	12/07	55 - 65	1,1-dichloroethene	72	1
			cis-1,2-dichloroethene	1.2	70
			1,1,1-trichloroethane (TCA)	16	30
			trichloroethene	240	1
			tetrachloroethene	4.8	1
* MW-25	12/07	27 - 42	trichloroethene	900	1
			tetrachloroethene	7.7	1
MW-25D	12/07	55 - 65	1,1-dichloroethene	98	1
			1,1,1-trichloroethane(TCA)	20	30
			trichloroethene	400	1
			tetrachloroethene	6.4	1

GWQS – Ground Water Quality Standards

Bolded concentrations exceed NJDEP Ground Water Quality Standards

* Only the TCE and PCE concentrations for the shallow monitoring wells, MW-23, MW-24 and MW-25 were available to SA. Because of their relative depths, the 'D' monitoring wells are more comparable to the borings advanced by SA in September 2010. It is likely that the ratios of the compounds detected in the deep monitoring wells are similar to those expected to be detected in the shallow monitoring wells.

Discuss contaminants identified in the monitoring wells above background and the ground water quality standards and provide the rationale for site attribution. State whether Level 1 or Level 2 contamination is present.

Four of the six monitoring wells in the above table are located hydraulically downgradient of the

two AOCs identified at Stonco. Monitoring wells MW-24 and MW-24D are located adjacent to the Stonco site (Maps 7, 8 and 10). TCE and PCE were detected in the two monitoring wells and 1,1-DCE, a breakdown product of TCA, was detected in MW-24D. It is important to remember that the full volatile scan for MW-24 was not available and 1,1-DCE was likely to have been present in it as well. The presence of 1,1-DCE in MW-24D coupled with the absence of TCA indicates that the release is likely to be older due to the low concentration of TCA. TCE, with an NJDEP GWQS of 1 ppb, was detected at 230 ppb in MW-23 and 240 ppb in MW-23D. PCE, also with an NJDEP GWQS of 1 ppb, was detected at 4.0 ppb in MW-23 and 4.8 ppb in MW-23D.

Documentation obtained for Stonco indicates that chlorinated solvents were used at the site as part of a wet paint process and for parts cleaning. Operations at Stonco may have contributed to the detection of these compounds in monitoring wells MW-24, MW-24D, MW-25 and MW-25D. However, a Site Investigation Report for the Premrefco/Premesco Site prepared by SA in March 2010 confirmed that significant amounts of chlorinated solvents were released from Premrefco/Premesco (Attachment P). Chlorinated solvents were known to have been used at Premrefco/Premesco from 1982 (possibly earlier) up until 2005.

Monitoring wells MW-25 and MW-25D are also located hydraulically downgradient of Stonco. Analysis of ground water samples collected from MW-25 and MW-25D indicate that both TCE and TCA, along with 1,1-DCE were detected. In December 2007, TCE, with an NJDEP GWQS of 1 ppb, was detected at 900 ppb in MW-25 and 400 ppb in MW-25D. In MW-25D, 1,1-DCE, with an NJDEP GWQS of 1 ppb, was detected at a concentration of 98 ppb (Map 10).

Since monitoring wells MW-24, MW-24D, MW-25, and MW-25D are located hydraulically downgradient and close to the Stonco property, it is likely that a release to the ground water occurred at Stonco and contributed to the detection of chlorinated solvents at concentrations exceeding background levels and the NJDEP Ground Water Quality Standards. Level 1 contamination is present.

C. GROUND WATER SAMPLING

Discuss any other ground water sampling that has occurred. For each sampling event, identify the sampler and date of sampling and list the name, address and certification number of the lab which performed the analyses. State who conducted the quality assurance review of the data and summarize any data qualifications.

Between September 8 and October 19, 2010, SA advanced nine borings on the Genlyte – Stonco property to collect soil and ground water samples. The borings were placed to assess the impact of the two AOCs identified at Stonco and an AOC identified at Premrefco/Premesco. The unconsolidated aquifer at Stonco occurs within glacial till sediments and the advancement of the borings was hampered by the presence of zones of refusal that were likely to be large cobbles. The collection of ground water samples was difficult due to the suspension of fine sediments in the ground water. The sediments in the ground water prevented the collection of samples using the check valve and tubing, surge technique. SA discovered that the most effective method to collect ground water samples was to use 2.5-inch steel geoprobe rods and advance them straight down to a depth of 50 feet. Temporary wells consisting of ten feet of 1 inch well screen and 40 feet of PVC riser were placed inside the geoprobe rods prior to pulling them up and exposing the screen to the aquifer. The column of ground water accumulating in the temporary wells was

typically 10 to 30 feet thick. SA determined that temporary well points set at depths less than 30 feet lacked sufficient ground water infiltration to collect a sample.

The following table summarizes the analysis of ground water samples collected from the nine borings during the Genlyte – Stonco SI. The USEPA Laboratory in Edison, NJ performed the analysis of the samples and the quality assurance review. The ground water samples were analyzed under the title 'KCS Lighting Inc #10090014' (Attachment K)

Tabulate sample numbers and the associated Area of Concern or describe the sample location. Identify samples which establish background conditions.

NJDEP, SA - September 2010 Temporary Well Points	
SAMPLE #	ASSOCIATED AOC/SAMPLE LOCATION
SB-1	Background Sample
SB-2	On site, Railroad Spur
SB-3	On site, within Hazardous Waste Storage Area
SB-4	On site, downgradient of Hazardous Waste Storage Area
SB-5	On site, within former UST Area
SB-7	On site, downgradient of Southeastern AOCs
TW-9	On site, downgradient of Premrefco Haz Waste Storage Area
TW-10	On site, downgradient of Premrefco Haz Waste Storage Area
TW-11	On site, cross gradient of Premrefco Haz Waste Storage Area

Tabulate contaminants identified in ground water. Include sample number, contaminant levels and corresponding NJDEP Ground Water Quality Standard (GWQS).

WESTERN SAMPLES PREMREFCO/PREMESCO AOCs				
SAMPLE #/ Date	SCREEN DEPTH (feet bgs)	CONTAMINANT	CONCENTRATION (ug/L)	NJDEP GWQS (ug/l)
SB-7 ** 10/19/10	39.5 – 49.5	Chloroform	0.46 J	1
		1,1-dichloroethane	0.74	50
		1,1-dichloroethene	29.1	1
		cis-1,2-dichloroethene	1.8	70
		tetrachloroethene	1.3	1
		1,1,1-Trichloroethane	3.5	30
		trichloroethene	260	1
TW-9 9/9/10	39 - 49	1,1-dichloroethene	310	1
		cis-1,2-dichloroethene	5.2	70
		tetrachloroethene	11	1
		1,1,1-trichloroethane	100	30
		trichloroethene	670	1
TW-10 9/8/10	35 - 49	1,1-dichloroethane	5	50
		1,1-dichloroethene	200	1
		1,1,1-trichloroethane	79	30
		trichloroethene	250	1
TW-11 9/9/10	39.5 – 49.5	1,1,1-trichloroethane	240	30
		trichloroethene	21	1

TW – Tessler and Weiss

(Maps 9 and 10)

** - Analysis by Accutest Laboratories through Philips

Discuss contaminants identified in ground water above background and the ground water quality standards and provide the rationale for site attribution. State whether Level 1 or Level 2 contamination is present.

The results of the subsurface investigation indicated that TCE, TCA and their breakdown products were detected in ground water samples collected from the Stonco site. The ground water samples collected from the western side of Stonco had the prefix of TW. TW stands for Tessler and Weiss which is another name for Premrefco/Premesco (Attachment P). The TW designations were added because the borings were advanced to determine the ground water impacts of AOCs located on the Premrefco/Premesco property. Although the borings are located on the Stonco property, there are no AOCs located on the western side of the Stonco property.

Ground water sample SB-7 was located downgradient of both the western samples and the eastern samples. (Maps 9 and 10) The highest contaminant concentrations detected on the Stonco property were located on the western side. TCE was detected at a concentration of 670 ppb, 1,1-DCE was detected at a concentration of 310, TCA was detected at a concentration of 240 ppm and PCE was detected at a concentration of 11 ppm. Each compound exceeded their NJDEP GWQS and it is likely that Premrefco/Premesco was responsible for the contamination in the 'TW' series ground water samples.

		EASTERN SAMPLES GENLYTE - STONCO AOCs		
SAMPLE #/ Date	SCREEN DEPTH (feet bgs)	CONTAMINANT	CONCENTRATION (ug/L)	NJDEP GWQS (ug/l)
SB-1 9/9/10	35 - 45	No detections	n/a	n/a
SB-2 9/8/10	34 - 49	Acetone	24	6,000
		cis-1,2-dichloroethene	12	70
		trichloroethene	9.7	1
		tetrachloroethene	8.7	1
		Hexanal *	7.2	
		cis-1-Butene, 1-Butoxy	7.5	
		heptane, 2,5-Dimethyl	11	
		nonanal *	7.9	
SB-3 9/8/10	33 - 43	Acetone	10	6,000
		cis-1,2-dichloroethene	50	70
		trichloroethene	13	1
		tetrachloroethene	5.1	1
SB-4 9/8/10	30 - 40	Acetone	41	6,000
		cis-1,2-dichloroethene	19	70
		trichloroethene	14	1
		tetrachloroethene	5.9	1
SB-5 ** 10/19/10	39.5 - 49.5	1,1-dichloroethane	0.75 J	50
		1,1-dichloroethene	0.45 J	1
		cis-1,2-dichloroethene	15.8	70
		trichloroethene	27.9	1
		tetrachloroethene	19.9	1

(Map 10)

** - Analysis by Accutest Laboratories through Philips

* **Hexanal**, or **hexanaldehyde**, is an alkyl aldehyde used in the flavor industry to produce fruity flavors. Its scent resembles freshly cut grass.

* **Nonanal**, also called nonanaldehyde or pelargonaldehyde, is an alkyl aldehyde. It has a strong fruity or floral odor and is used in flavors and perfume.

GWQS – Ground Water Quality Standards

Bolded Concentrations – Compound exceeds NJDEP GWQS

Borings were advanced on the eastern portion of the Genlyte-Stonco site to investigate AOCs identified during SA's historical research. The information available to SA was relevant to the operations of the Stonco facility and limited to an ISRA application and waste manifests obtained from the NJDEP, Division of Hazardous Waste Management. Stonco operated on the site from 1979 to the present (2010) for a total of approximately 30 years. Prior to the operations of Stonco, A.P.W. Products, a paper supply company and the Hazel Bishop Company operated on the site for 25 years. SA could find no information concerning the nature of operations or the materials used at Hazel Bishop. Hazel Bishop was a cosmetics firm but not even generalities could not be made concerning its operations. An old railroad siding is located on the northeastern corner of the site. This would allow the delivery of needed materials in bulk. Stonco did not use the siding so it was used by either or both Hazel Bishop and A.P.W. Products. SA advanced boring SB-2 in the area of the railroad siding and collected a ground water sample. The original intent of the sample was to provide background data related to the AOCs on the eastern side of Stonco. Upon analysis of the sample it was discovered that both hexanal and nonanal were detected in the sample. Both compounds are alkyl aldehydes and both have scent characteristics that would make them desirable as perfume constituents. The presence of these compounds is indicative of the operations of Hazel Bishop. Also detected in ground water sample SB-2 were TCE at a concentration of 9.7 ppb and PCE at a concentration of 8.7 ppb, both exceeding the NJDEP GWQS of 1 ppb. Cis 1,2-dichloroethene (1,2-DCE), a breakdown product of TCE, was detected at a concentration of 12 ppb, below the GWQS of 70 ppb. The presence of 1,2-DCE is indicative of an older release.

Soil boring SB-3 was advanced in the AOC where a 1999 Stonco Map (Map 6) indicated a hazardous waste storage area had been located. The compounds detected in ground water sample SB-3 included TCE at a concentration of 13 ppb, PCE at a concentration of 5.1 ppb and 1,2-DCE at a concentration of 50 ppb. Both TCE and PCE exceeded the GWQS of 1 ppb for each compound but the GWQS for 1,2-DCE was not exceeded. The pathway for the contaminants to enter the ground water is not known, but based upon the proximity to the hazardous waste storage area, it is not unreasonable to speculate that a release of contamination could have occurred during storage or disposal of the hazardous waste. Map 6 indicated that there were no floor drains in the hazardous waste storage area.

Soil boring SB-4 was positioned hydraulically downgradient of an area on Map 6 labeled chemical storage room. In addition, the map shows two floor drains located within the main building that are connected to each other and discharge from the building to the main sanitary sewer. It was hoped that if there was a significant discharge of hazardous material from the floor drains and eventually the sewer piping, it would be picked up in ground water sample SB-4. The analysis of sample SB-4 indicated that TCE was detected at a concentration of 14 ppb, PCE at a concentration of 5.9 ppb and 1,2-DCE at a concentration of 19 ppb. Both TCE and PCE exceeded the GWQS of 1 ppb for each compound but the GWQS for 1,2-DCE was not exceeded. The fact that the compounds detected and their concentrations in SB-4 were similar to those detected in SB-3 seems to indicate a broad area of impact in the shallow ground water.

Boring SB-5 was advanced at the AOC where the former heating oil USTs were located and where a waste water discharge line connecting two floor drains located in the painting area and the paint storage area within the building, connects to the municipal sewer pipe. (Map 6) UST soil sampling conducted by BBL in 1999 to support the 1985 closure of the UST system detected a low concentration of PCE in one of the soil samples. SA followed up with a soil sampling event and also detected a low concentration (0.040 ppm) of PCE in a soil sample. SA supervised the

advancement of a boring by consultants for Philips for both the soil and the ground water sample. At their insistence, Philips provided their own consultant and Geoprobe subcontractor for the boring at this location and location SB-7. The results of the analysis of a ground water sample indicated the detection of TCE at a concentration of 27.9 ppb, PCE at a concentration of 19.9 ppb and 1,2-DCE at a concentration of 15.8 ppb. Both TCE and PCE exceeded the GWQS of 1 ppb for each compound but the GWQS for 1,2-DCE was not exceeded. 1,1-dichloroethene and 1,1-dichloroethane were also detected at concentrations less than 1 ppb.

The confirmation that chlorinated solvents were used at Stonco and the detection of chlorinated solvents in the ground water at the eastern portion of the Stonco facility suggests that Stonco or their predecessors released contamination into the ground water. While detected concentrations of PCE and TCE do not indicate a major source area of the release, the time that has lapsed between the contaminant releases and the contemporary subsurface investigation performed by SA is long enough to allow both biodegradation of the original compounds and migration into the bedrock aquifer.

Based upon the results of ground water sampling in the eastern portions of the Stonco facility, a documented release of PCE and TCE to ground water attributable to the site has been confirmed. Level 1 contamination attributable to Genlyte - Stonco was detected in the unconsolidated aquifer.

D. POTABLE WELL INFORMATION

Distance to nearest potable well: > 1 mile. Information obtained by SA indicates that the closest potable well is more than a mile from the site. This information is based upon a Site Investigation report prepared for the Durex Inc. site located approximately 1,200 feet southwest of the PREMESCO site. (Attachment Q)

Depth of nearest potable well: 130 feet

Identify all public supply wells within 4 miles of the site and tabulate for each aquifer the population utilizing that aquifer for drinking purposes. Include only those populations which utilize wells that have a potential to be impacted, not wells which are actually impacted. Do not list private potable wells individually in this table, but include populations served by these private wells. (Attachment R)

The **South Orange Water Department** operates one well which is located between two and three miles from the site. The well draws from the Brunswick Formation and serves 16,924 residents.

The **Orange City Water Company** operates five wells within four miles of the site, all drawing from glacial sands and gravel of the Quaternary Stratified Drift. According to NJDEP research, the Orange City Water Company operates a total of seven wells and serves 33,000 residents. Approximately 4,714 people are served per well and the five wells within four miles of the site serve 23,570 people.

The **New Jersey American – Raritan Water System** serves a total population of approximately 609,325. Approximately 92% of its delivered water is obtained from surface water while the remaining 8% is supplied from approximately 80 wells drawing from the glacial sands and gravel of the Quaternary Stratified Drift and the Brunswick Formation. The approximate number of people served per well is 609. This water system operates 23 wells located within four miles of the site and they serve a total of 14,007 people. Seven wells draw from the stratified drift and 16 wells draw from the Brunswick Formation.

The **New Jersey American – Short Hills Water System** serves a total population of approximately 217,230. Approximately 92% of its delivered water is obtained from surface water while the remaining 8% is supplied from approximately 23 wells drawing from the Brunswick Formation. The approximate number of people served per well is 756. This water system operates two wells located within two miles of the site serving a total of 1,512 people. The two wells are 100 feet deep and draw water from glacial sands and gravel of the Quaternary Stratified Drift.

Totals

Distance from Site (Miles)	Number of wells	Population Totals	Aquifer
1.0 mile – 2.0 mile	20	12,474	*
2.0 mile – 3.0 mile	7	36,998	*
3.0 mile – 4.0 mile	4	6,541	*

Total 56,013

* Wells in Quaternary Stratified Drift - 14
 Wells in the Brunswick Formation - 17
 (Attachment M)

State whether ground water is blended with surface water, ground water or both prior to distribution:

Ground water is blended with surface water at the New Jersey American Raritan Water System and the New Jersey American Short Hills Water System (Attachment R)

Discuss private potable well use within 4 miles of the site. Include depth, formation and distance, if available.

There are no potable domestic wells in use in the Boroughs of Kenilworth, Roselle, Hillside and the Township of Maplewood. The Township of Cranford has one domestic well of unknown depth in use and the Township of Springfield maintains records for two wells, also of unknown depth. Union Township has 11 domestic wells ranging in depth between 100 and 400 feet. The closest known potable well is more than 1 mile from the site.

Discuss the site's source of potable water.

The site receives water from the New Jersey American – Raritan Water System. (Attachment R)

Discuss information concerning the population utilizing wells that are known to be contaminated with hazardous substances which are attributable to the site. Also include any other evidence of contaminated drinking water or wells closed due to contamination. State whether Level 1 or Level 2 contamination is present.

There are no known potable wells contaminated with hazardous substances that are attributable to the site.

The subsurface investigation at Genlyte Stonco was conducted to determine if the ground water under the site was impacted by chlorinated solvents. Potential contaminant sources were investigated due to the detection of high concentrations of TCE in the indoor air of the Hickory Manor Condominiums. The area in which the condos were constructed was formerly the site Harvard Industries, a large industrial complex. Harvard Industries through the course of its many years of operation, generated its own wastes and subsequently impacted the subsurface (Attachment S). The use of chlorinated solvents including TCE was documented at Harvard Industries and TCE was the primary contaminant of concern in the ground water at Harvard Industries. After many years of investigating their own environmental problems, the Amerace Corporation Division of Harvard Industries former Elastic Stop Nut of America facility went through ISRA (Case #E88A66) and was eventually granted an NFA from the Department in May 1999. (Attachment S) The basis of the NFA was that the soil and ground water were remediated to the satisfaction of the Department and that Harvard Industries had successfully argued that the ground water contamination at Harvard Industries resulted from an upgradient source.

The Harvard Industries industrial complex was demolished and hauled away. Having received the NFA for the site, the developer Hovnanian at Union Township I, was brought in and the condos, consisting of several multi-unit buildings, were built. In 2010, it was discovered that the indoor air concentration of TCE in the condos exceeded the Rapid Action Levels of the NJDEP Guidance Document. Sub slab vapor recovery units have been installed on the condo units.

Identify any resource uses of ground water within 4 miles of the site (i.e., commercial livestock watering, ingredient in commercial food preparation, supply for commercial aquaculture, supply for major or designated water recreation area, excluding drinking water use, irrigation of commercial food or commercial forage crops, unusable).

There are numerous industrial and irrigation wells in the vicinity of the site. The irrigation wells are operated by several different golf courses. Tuscan Dairy Farms, Inc operates three wells between 2 and 3 miles from the site. There are no commercial wells within 1 mile of the site. (Map 11)

Name	Distance (miles)	Depth (feet)	Formation
Baltusrol Golf Club	3.0	203	Brunswick
Baltusrol Golf Club	3.0	288	Brunswick
Baltusrol Golf Club	3.9	515	Brunswick
Tuscan Dairy Farms Inc.	2.3	300	Brunswick
Tuscan Dairy Farms Inc.	2.3	620	Brunswick
Tuscan Dairy Farms Inc.	1.4	200	Brunswick
Suburban Golf Club	1.7	250	Brunswick
Suburban Golf Club	1.7	500	Brunswick

(Attachment Q)

PART VI: SURFACE WATER ROUTE

A. SURFACE WATER

Does a migration pathway to surface water exist? No. Tributary is 0.2 miles northwest of the site.

Flood plain: Site is not in a flood plain (Map 12)

Size of drainage area for sources at the site in acres:

2-year, 24-hour rainfall in inches: 3.4 (Attachment T)

Does contaminated ground water discharge to surface water? Unknown

Identify known or potentially contaminated surface water bodies. Follow the pathway of the surface water and indicate all adjoining bodies of water along a route of 15 stream miles.

Surface Water Body	Distance from Site (miles)	Flow (cfs)	Usage(s)
Unknown Tributary to Rahway River	0.21	<10	Primary and secondary contact recreation, fishing
Unknown Tributary to Rahway River	1.06	10	recreational fishing
Rahway River	1.29	10 - peak flow of 40	Most areas unsuitable for primary and secondary contact recreation, no swimming, fishing
Surface Water Intake on Rahway River Lake	12.74		Stocked w/ trout

Identify drinking water intakes and fisheries within 15 miles downstream (or upstream in tidal areas) of the site. For each intake or fishery identify the distance from the point of surface water entry, the name of the fishery and/or supplier and population served.

There is a surface water intake approximately 12.74 miles downstream south of the site on or near the Rahway River Lake. It is a public community well operated by the Rahway Water Department and serves 26,000 people with a 5.5 million gallons/day withdrawal rate. Most of the Rahway River is designated as fresh water non-trout but there have been recent efforts to stock the river with trout.

Discuss surface water and/or sediment sampling conducted in relation to the site. Include surface water body, sampling date, sampling agency or company. State whether Level 1 or Level 2 contamination is present for surface water. State whether Level 2 contamination of sediments is present. For each sampling event, list the name, address and certification number of the lab which performed the analyses. State who conducted the quality assurance review of the data and summarize any data qualifications. Discuss visual observations if analytical data are not available (include date of observation).

No sampling was conducted.

Determine if a contaminant on site displays bioaccumulative properties. Identify all bioaccumulative substances that may impact the food chain.

No such contaminants were detected.

Determine if surface water is used for irrigation of commercial food or commercial forage crops, watering of commercial livestock, commercial food preparation or recreation.

No surface water near the Stonco site is used for the irrigation of commercial food or forage crops, watering of commercial livestock or commercial food preparation.

B. SENSITIVE ENVIRONMENTS

Identify all sensitive environments, including wetlands, along the 15 stream-mile pathway from the site:

Since most of the release of contaminants occurred in the subsurface, a surface water pathway was not evaluated. Any releases to the ground surface at the Stonco site were likely to be immediately absorbed into the soil. Map 13 identifies wetlands located within 4 miles of the site.

C. LIKELIHOOD OF RELEASE

Discuss the likelihood of a release of contaminant(s) to surface water, include any additional information concerning the surface water route. Identify contaminants detected and provide a rationale for attributing them to the site. Identify any intakes, fisheries and sensitive environments, listed above, that are or may be actually contaminated by hazardous substances attributed to an observed release from the site.

Since most of the contaminant release was to the subsurface, it is unlikely that the surface water pathway of the site was impacted. Although a surface release was not detected, it is possible that contaminants were spilled to the surface and readily absorbed into the soil.

PART VII: AIR ROUTE

A. POPULATION AND SENSITIVE ENVIRONMENTS

Identify populations residing within 4 miles of the site. (Map 14)

Distance (miles)	Population
on site	12 workers
> 0 - 1/4	646
> 1/4 - 1/2	4,771
> 1/2 - 1	19,923
> 1 - 2	60,639
> 2 - 3	111,253
> 3 - 4	190,901

Identify sensitive environments and wetland acreage within 4 miles of the site.

Distance (miles)	Type of environment
0 - 1/4	Forested wetlands and fresh water marshes
> 1/4 - 1/2	Forested wetlands and fresh water marshes
> 1/2 - 1	Forested wetlands and fresh water marshes
> 1 - 2	Forested wetlands and fresh water marshes
> 2 - 3	Forested wetlands and fresh water marshes
> 3 - 4	Forested wetlands and fresh water marshes

Map 13

B. LIKELIHOOD OF RELEASE

Describe the likelihood of release of hazardous substances to air. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For an observed release, discuss the supporting analytical evidence and its significance relative to background.

Based upon current NJDEP guidance regarding indoor air, it is possible that the site building itself may be impacted by vapor intrusion from the significant concentrations of chlorinated solvents detected in the shallow aquifer beneath the site.

If a release to air is observed or suspected, determine the number of people that reside within the area of air contamination.

A release to air was neither observed nor suspected.

If a release to air is observed, identify any sensitive environments that are located within the area of air contamination.

A release to air was neither observed nor suspected.

PART VIII: REMOVAL ACTION AND/OR IEC CONDITION

Discuss conditions which constitute an Immediate Environmental Concern (IEC) or warrant EPA Removal Action consideration (improper storage of incompatible/reactive materials, leaking or unsound containers, inadequate site security, subsurface gas threat).

There were no IEC conditions found during the Site Investigation.

PART IX: CONCLUSIONS AND RECOMMENDATIONS

KCS Lighting Inc. Stonco Lighting Division operated on its property from 1979 to 2011. Their SIC codes of 3645 and 3646 indicate that they are involved in the production of residential electric lighting fixtures as well as commercial, industrial and institutional electric lighting fixtures.

Stonco assembled lighting fixtures and characterized the work as light assembly with drilling and minor tapping. Stonco does not fabricate parts, but a portion of their current operations involves the finishing of premade cast lighting housing. The housing boxes are currently finished in a closed system where they are powder coated using dry electrostatic deposition with baking enamel. Some items requiring minor machining or custom coating are sent to machining areas or to the wet paint room. Light housings and components are assembled on lines and stored on pallets prior to shipping.

Prior to the dry finishing process, Stonco operated a wet paint line and generated F001 waste which is waste PCE, TCE, TCA and/or methylene chloride used in large-scale industrial degreasing operations. Between 1982 and 1985, Stonco manifested 2,860 gallons of F001 waste. The precise use of the chlorinated solvent is not known, but it was likely to have involved pre-painting degreasing and the cleaning of paint equipment. It is not known how the wastes were disposed between 1979 and 1982.

SA researched the NJDEP Right to Know data base and discovered that Stonco used TCE from 1992 to 1995 and TCA from 1996 to 1997. The solvents were used in the machine shop and approximately 10 pounds were present on a daily basis. It is likely that the solvents were used in a closed parts washing station. Right to Know data prior to 1992 was not available.

Stonco was investigated because of chlorinated solvent contamination discovered in the ground water hydraulically downgradient of their facility. Located downgradient was the former Amerace Corporation Division of Harvard Industries, now the Hickory Manor Condominiums. During a period spanning the 1960's to the late 1990's, ground water contaminated by chlorinated solvents was discovered at Harvard Industries. Harvard Industries, based on its downgradient position relative to another manufacturer called Red Devil, contended that their ground water contamination resulted from operations at Red Devil in spite of documented use of chlorinated solvents at Harvard Industries. Red Devil confirmed releases of TCE from their own operations. After installing more than 30 monitoring wells to investigate their own ground water contamination, Red Devil discovered significant TCE contamination in a hydraulically upgradient monitoring well relative to their area of release and located near the Premrefco/Premesco Property. In December 2007, consultants for Red Devil installed two nested monitoring wells, MW-23 and MW23D in the northern right-of-way of Vauxhall Road, located several feet from the Premrefco/Premesco property line. Upon analysis of a ground water sample collected from monitoring well MW-23, the shallow well, TCE was detected at a concentration of 900 ppb, exceeding the NJDEP Ground Water Quality Standard of 1 ppb. Monitoring wells MW-24 and 24D were installed in the right of way of Vauxhall Road on the southwest corner of the Stonco property. Consultants for Red Devil constructed a ground water contour map that included MW-23 and MW-24 and determined that both the Premrefco/Premesco property and Stonco property were located hydraulically upgradient of Red Devil and the Harvard Industries facility. The consultants concluded that Premrefco/Premesco was likely responsible for ground water contamination on both the Red Devil and the Harvard Industries Property. Stonco was not named by the Red Devil consultants as a possible source of contamination at the Red Devil site, but by virtue of their position hydraulically upgradient of Harvard Industries (Hickory Manor Condominiums) as determined by the ground water flow maps, contamination derived from operations at Stonco would likely impact the Condominiums. Having received a No Further Action designation in relation to their contamination issues, Harvard Industries was demolished and the Hickory Manor Condominiums were built on the cleared land in the early 2000's.

Due to a change of ownership in 1998, The Genlyte Group, Inc., the owners of Stonco, submitted an ISRA General Information Notice to the NJDEP, Division of Hazardous Waste Management. A Preliminary Assessment Report was prepared on behalf of Stonco by Blasland, Bouck and Lee, Inc in October, 1999. BBL investigated each potential area of concern at the Stonco facility and decided that only one needed further investigation.

BBL identified an area where two heating oil USTs had been closed in 1985. Because there was no information concerning the condition of the soils after the tank closures, BBL dug two test pits in the approximate locations of the former USTs to document soil conditions. Soil samples were collected from the two test pits and the results of the analysis indicated that in soil sample A-4 in the test pit for the former 10,000 gallon UST, total petroleum hydrocarbons were detected at a concentration of 21,500 ppm exceeding the NJDEP SCC of 10,000 ppm. During the excavation of the test pits, BBL segregated soils that, based on darkened colors and elevated concentrations from screening instruments, appeared to be contaminated. BBL estimated that one-half cubic yards of impacted soil was removed from the test pit and properly disposed. Because the TPH concentration of soil samples collected adjacent to sample A-4 were below the SCC, BBL argued that contamination had been horizontally delineated and no further actions were necessary. In soil sample A-3, PCE was detected at a concentration of 0.170 ppm, below the SCC of 1.0 ppm. It is not known how the PCE got to the subsurface at a depth that can only be speculated upon because BBL did not provide soil depths for any of their confirmatory soil samples. One possibility is the fact that the discharge wastewater pipe that drains two floor drains in the paint rooms connects to the main sewer pipe within several feet of the former UST areas. If PCE was disposed through the waste water discharge pipe and the pipe had leaked, then it was possible that PCE could have entered the soil and consequently the ground water.

NJDEP responded to BBL's request for an NFA by requiring them to vertically delineate the TPH soil contamination detected in sample A-4. BBL advanced a boring in the vicinity of former sample A-4. Soil samples for TPH and VOCs were collected at the intervals 10.0 to 10.5 feet bgs and 12.0 to 12.5 feet bgs. Table 2 in the September 1, 2000 summary letter from BBL summarized the photoionization detector readings, presented a log of the soils and stated that soil samples for TPH and VOCs were collected. Only the results for the sample collected at 12.0 to 12.5 feet bgs was summarized in the report and the analytical result of that sample indicated that there were no VOCs detected. BBL compiled the additional data and after a review by the NJDEP, was granted an NFA.

Based upon their own research, NJDEP SA concluded there were two AOCs that required investigation. The first AOC was the former UST excavations where SA sought to confirm the detection of PCE in the soil by collecting ground water samples in the vicinity of the USTs and the process discharge pipe to the sewer. The second AOC was discovered when SA located a map of the Stonco building and noticed that two adjacent areas identified on the map were labeled 'chemical storage area' and 'hazardous waste storage area'. Because the two areas on the map are located adjacent to each other, SA treated them as one AOC. Both of these AOCs are located on the eastern portion of the plant and the investigation of these AOCs was independent of the subsurface investigation conducted on the western portion of the Stonco plant.

SA confirmed the presence of PCE in a soil sample collected in the area of the UST/process pipe AOC and in a soil sample collected at the AOC located near the former hazardous waste storage area. Both detections were well below the NJDEP SCC.

SA collected ground water samples by advancing a Geoprobe boring to a depth of 50 feet bgs. This depth was close to the unconsolidated aquifer/bedrock interface. Attempts were made to collect ground water samples at depths less than 30 feet bgs, but adequate ground water occurred only at deeper depths. Four soil borings were advanced on the eastern portion of the Stonco facility to assess the two AOCs. Both PCE and TCE were detected in all four samples at concentrations ranging between 9.7 and 27.9 ppb for TCE and 8.7 and 19.9 ppb for PCE. The

higher range of the detections occurred at the former UST area but overall, the concentrations of TCE and PCE were consistent throughout the four ground water samples on the eastern side of Stonco. The presence of breakdown products 1,2-DCE, 1,1-DCE and 1,1-DCA in several of the ground water samples suggest that the release is old. SA was unable to assess the ground water in the bedrock aquifer which may also be adversely impacted.

SA also assessed the ground water on the western portion of the Stonco facility in spite of the lack of Stonco AOCs located on the western side. Five borings were advanced to assess ground water including boring SB-1, the upgradient and background sample. There were no target VOCs detected in either the soil or ground water sample collected from the background location. Three borings were advanced on the Stonco property but adjacent to the Premrefco/Premesco facility. The three borings may be identified because they have the prefix 'TW' which stands for Tessler and Weiss, another permutation of Premrefco/Premesco. The TW borings were advanced primarily to assess the impact of the Premrefco/Premesco operations to the ground water beneath the Stonco property. Analysis of the ground water samples indicate that 1,1-DCE was detected in a downgradient sample (TW-9) at a concentration of 310 ppb, PCE was detected in the same sample at 11ppb, TCA was detected in a range between 79 to 240 ppb in all three samples and TCE was detected in a range of concentrations between 21 and 670 ppb also in all three samples with the highest concentration being the farthest downgradient. SA's Site Investigation of Premrefco/Premesco documented the use of chlorinated solvents in their operations up until the early 1990's. Research also determined that the Premrefco/Premesco's hazardous waste storage area was located hydraulically upgradient of the area of contaminated ground water discovered on the Stonco property.

Boring SB-7 was advanced in an area hydraulically downgradient of both the AOCs on the Premrefco/Premesco property and the AOCs on the Stonco property. Ground water sample analysis indicates that TCE was detected at a concentration of 260 ppb, PCE was detected at a concentration of 1.3 ppb and 1,1-DCE was detected at a concentration of 29.1 ppb. All three compounds exceeded their respective GWQS, and it is likely that most of the contamination detected in SB-7 originated from Premrefco/Premesco. However, the same compounds were detected on the eastern side of Stonco and available ground water flow direction information suggests that the Stonco AOCs are also located hydraulically upgradient of SB-7. The potential for the migration of chlorinated solvents resulting from Stonco operations toward the Hickory Manor Condominiums cannot be ignored. The evaluation of the bedrock ground water will also help to determine the contribution to regional ground water contamination that Stonco has made.

A row of homes are located within 200 feet of the eastern side of the Stonco facility where the AOCs are located. Because the homes are located hydraulically crossgradient to downgradient of the Stonco AOCs, the homes have the potential to be impacted by Vapor Intrusion (VI) (Map 15)

Indoor air samples should be collected inside the Stonco facility to ensure that indoor air contaminant concentrations are within NJDEP guidelines. Specifically, the Stonco offices, located in the southernmost portion of the building, are located 230 feet hydraulically downgradient of boring TW-10 where TCE was detected in the ground water at a concentration of 250 ppb. In addition, the offices are located 75 feet and hydraulically cross-gradient of boring SB-7 where TCE was detected in the ground water at a concentration of 260 ppb. The detection of TCE at a concentration of 250 ppb in a ground water sample located upgradient of the Stonco offices is a cause for concern of indoor air quality, especially since the Hickory Manor Condominiums, located

480 feet hydraulically downgradient of boring TW-11, were adversely impacted by contaminated indoor air.

Due to its documented use of chlorinated solvents, and the detection of PCE and TCE in the shallow ground water beneath its site related to two areas of concern, a release attributed to Stonco has been documented. An Expanded Site Investigation is necessary to establish the impact of the releases at Stonco, if any, on the Hickory Manor Condominiums.

Philips Electronics of North America, as owners of Genlyte-Stonco should comply with N.J.A.C. 7:26E 4.4, Remedial Investigation of Ground Water. A soil gas survey should be conducted in the offices of the Stonco facility and in the homes located east of the Stonco AOCs.

The HRS score for this site is greater than 28.5; therefore, the site is assigned a higher priority for further action under CERCLA.

Submitted by: Steven Hoke
Title: Senior Geologist
NJDEP, Bureau of Environmental Measurements and Site Assessment
Date: 04/15/11

PART X: POTENTIALLY RESPONSIBLE PARTIES

NAME	OWNER/OPERATOR/ KNOWN DISCHARGER	CURRENT ADDRESS
Dianne Adamowitz-Murphy, P.E., CHMM Environmental Project Coordinator	Owner Representative	Philips Lighting Company 200 Franklin Square Drive Somerset, New Jersey 08873

MAPS



0 2,350 4,700 9,400 Feet

New Jersey



KCS Lighting, Inc.
Stonco Division
2345 Vauxhall Road
Union, New Jersey

USGS Topographic Map
Roselle, New Jersey
1981

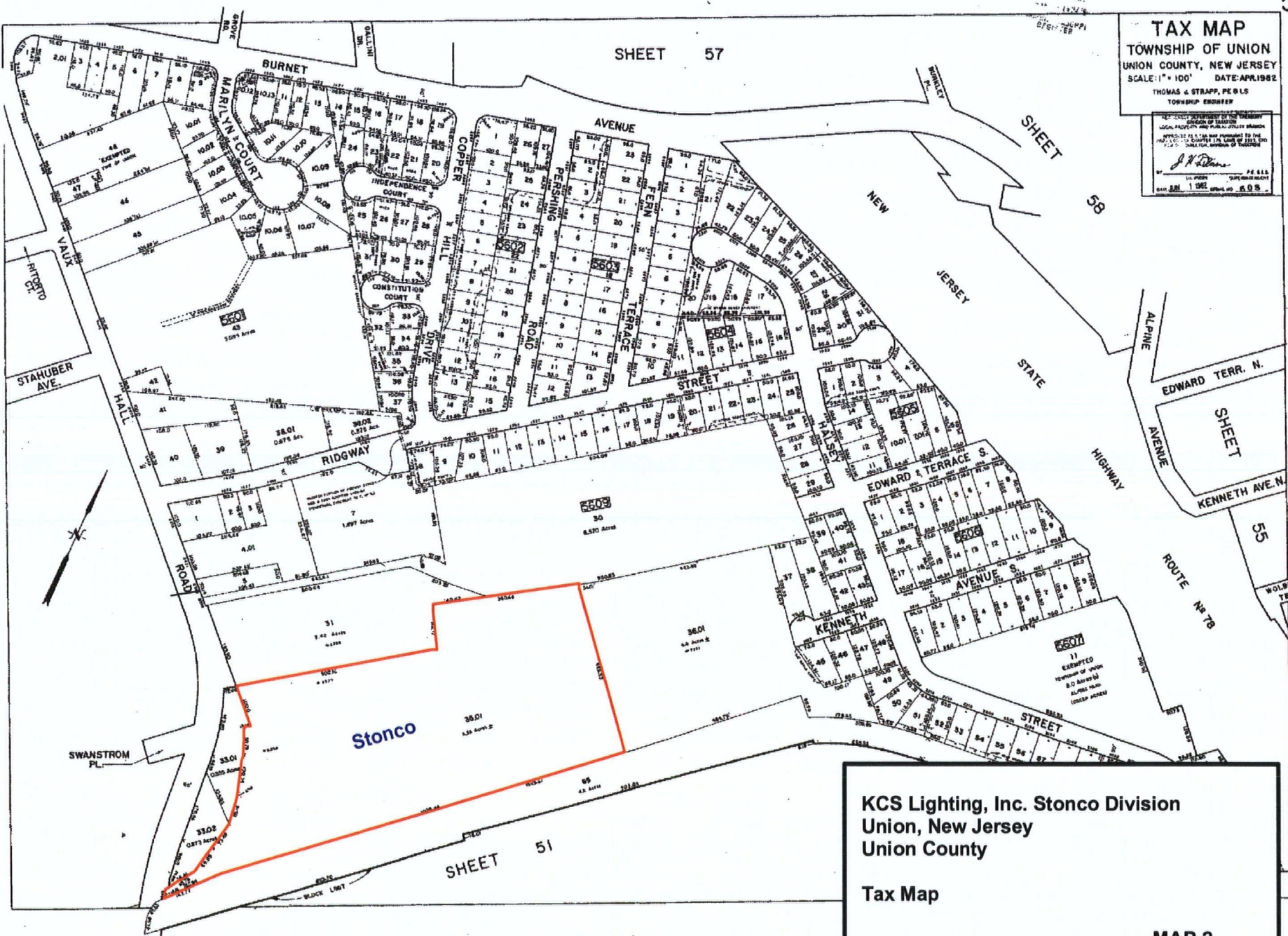


Map 1

TAX MAP
TOWNSHIP OF UNION
UNION COUNTY, NEW JERSEY
SCALE: 1" = 100' DATE: APR 1982
THOMAS & STRAPP, P.E. & L.S.
TOWNSHIP ENGINEER

RECEIVED & RECORDED
1982 APR 21
STAFF: 788

RECEIVED DEPARTMENT OF THE TREASURY
SECTION OF TAXATION
LOCAL PROPERTY AND PUBLIC UTILITY TAXES
APPROVED FOR THE TAX MAP PREPARED BY THE
TOWNSHIP ENGINEER
J. H. Williams
PE & L.S.
DATE: APR 1982



KCS Lighting, Inc. Stonco Division
Union, New Jersey
Union County

Tax Map

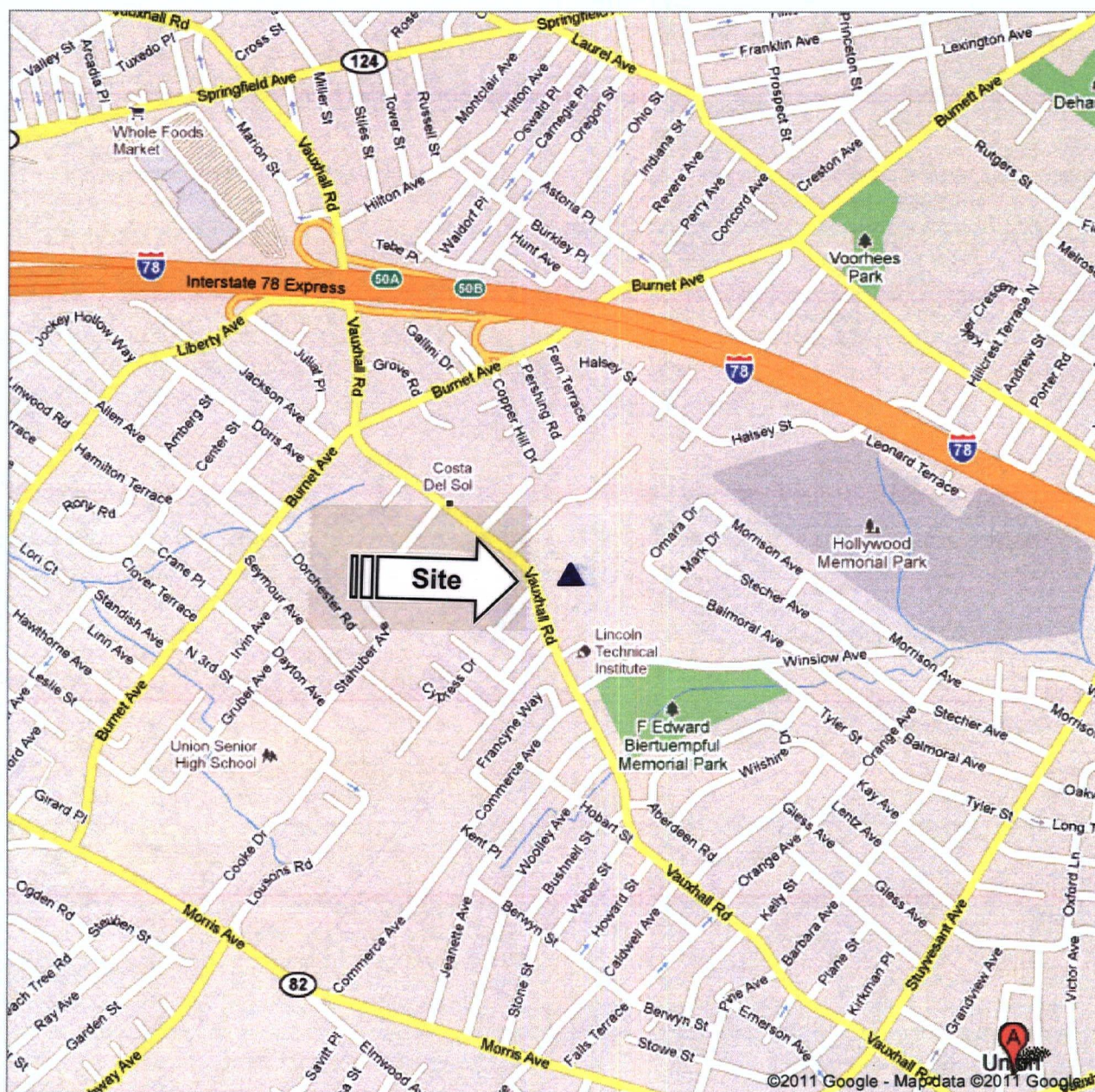
MAP 2

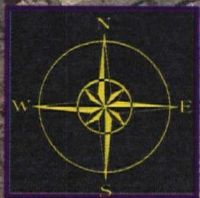


Address Union, NJ

Notes KCS Lighting - Stonco Div.
Union, NJ

Map 3





Federal Express

Oliner Fibre

Newark Safety Service

Sunoco

ABM

Premesco

KCS Lighting Inc. - Stonco Division

Red Devil

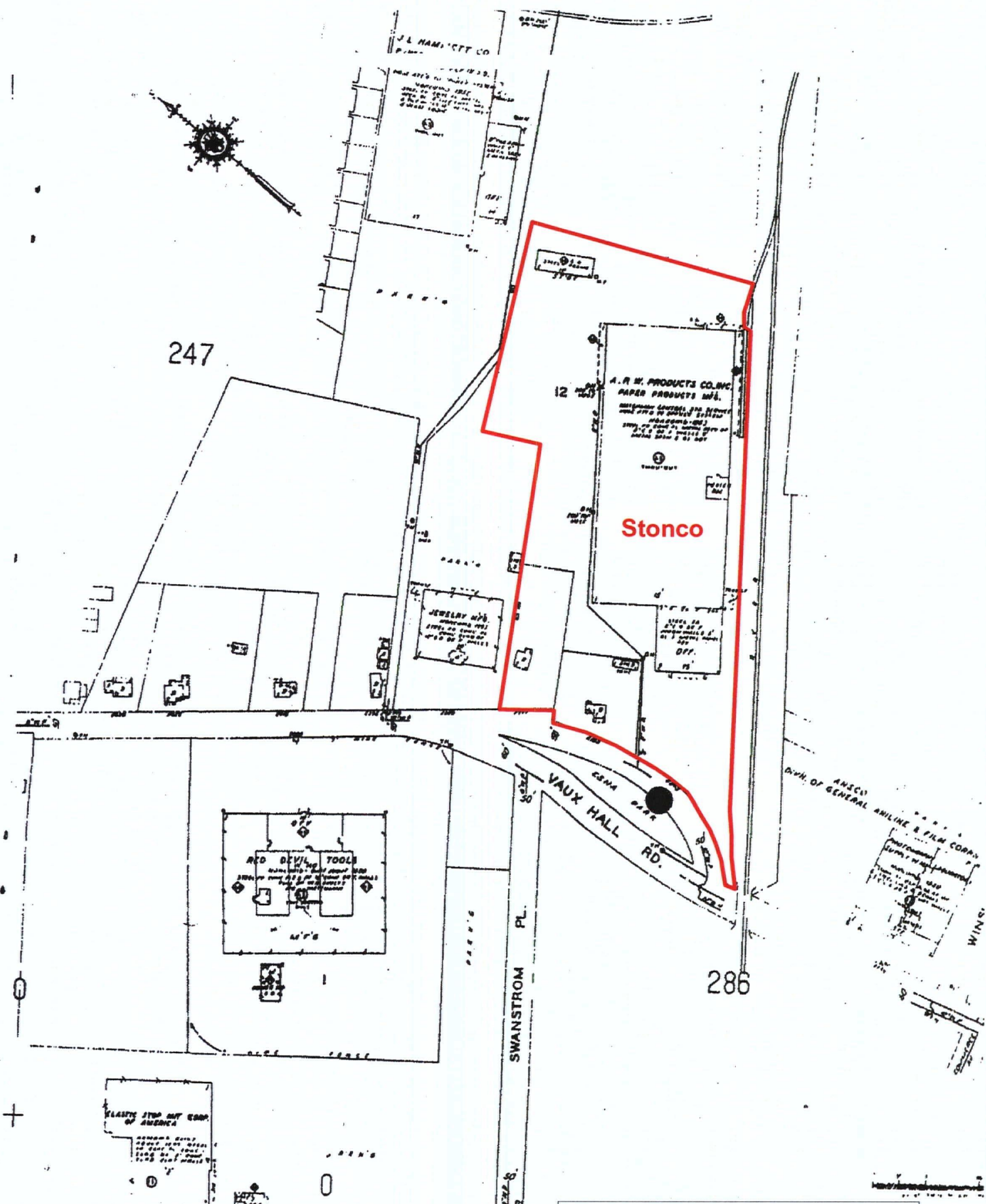
Hickory Manor Condominiums

Former Harvard Industries Building

Lincoln Technical Institute

**KCS Lighting, Inc.
Stonco Division
Surrounding Property Map**

Map 4



KCS Lighting, Inc.
Stonco Division
Union Twp, Union County
Sanborn Map

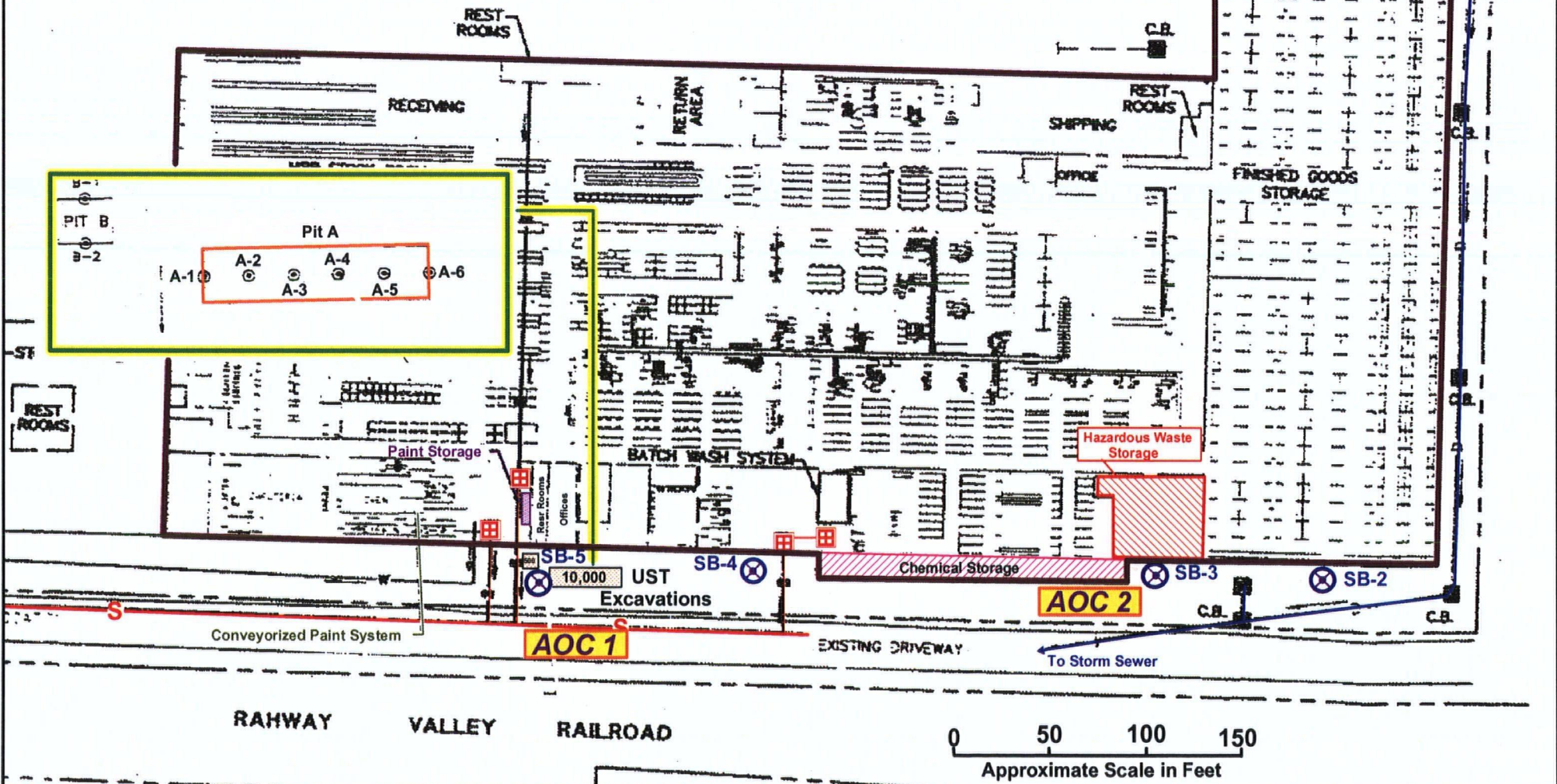
Map 5

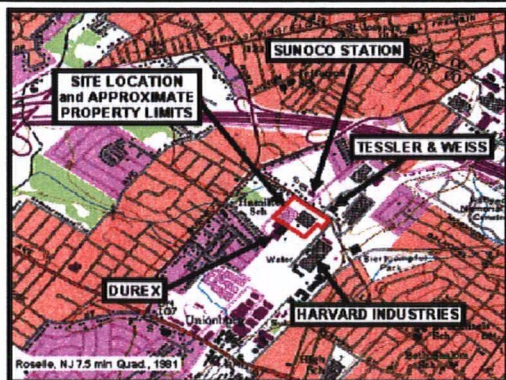
Legend

-  Floor Drain
-  Catch Basin
-  Sanitary Sewer
-  Storm Sewer

KCS Lighting, Inc. Stonco Division Site Map with AOCs

Map 6

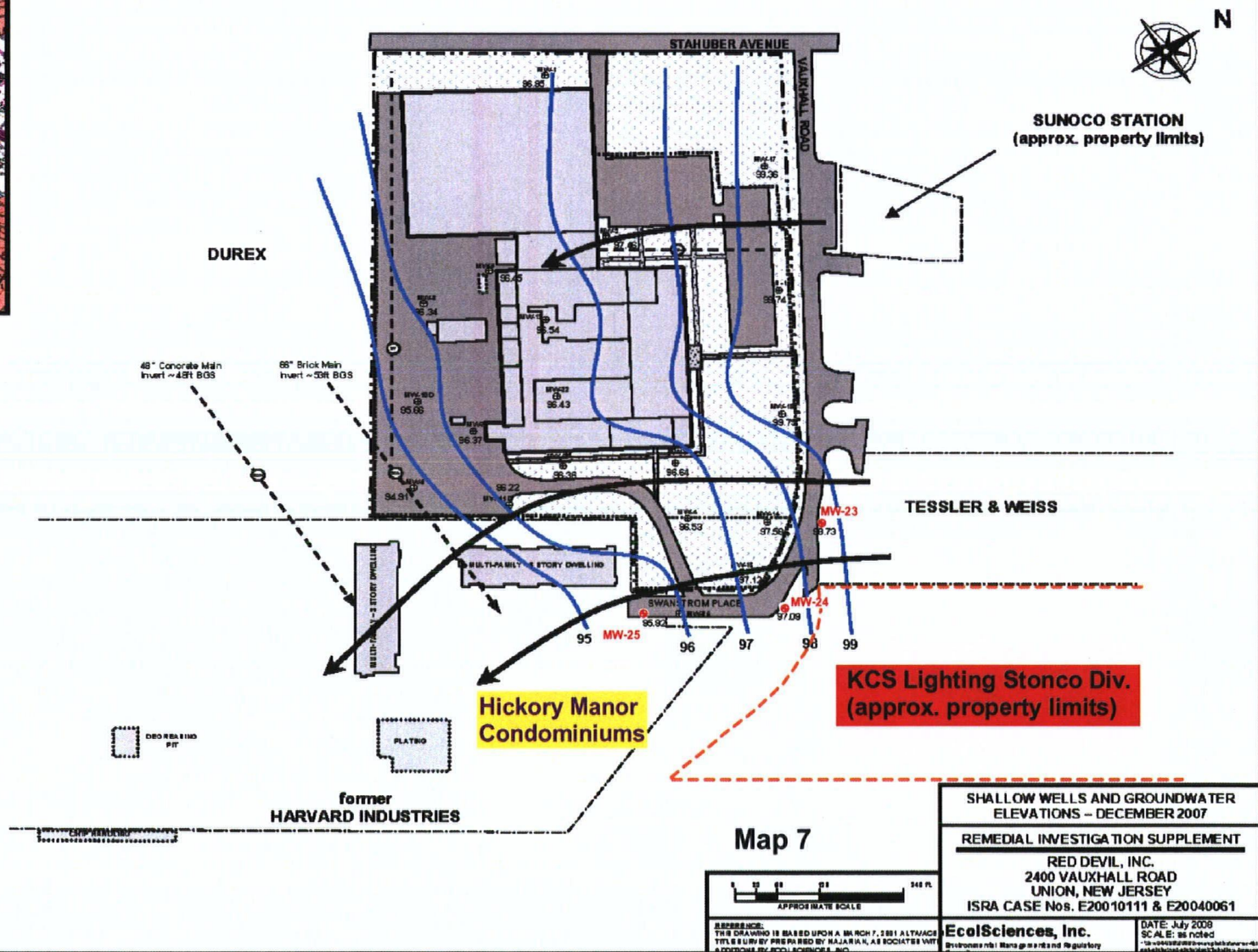
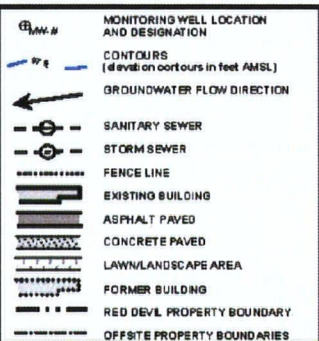


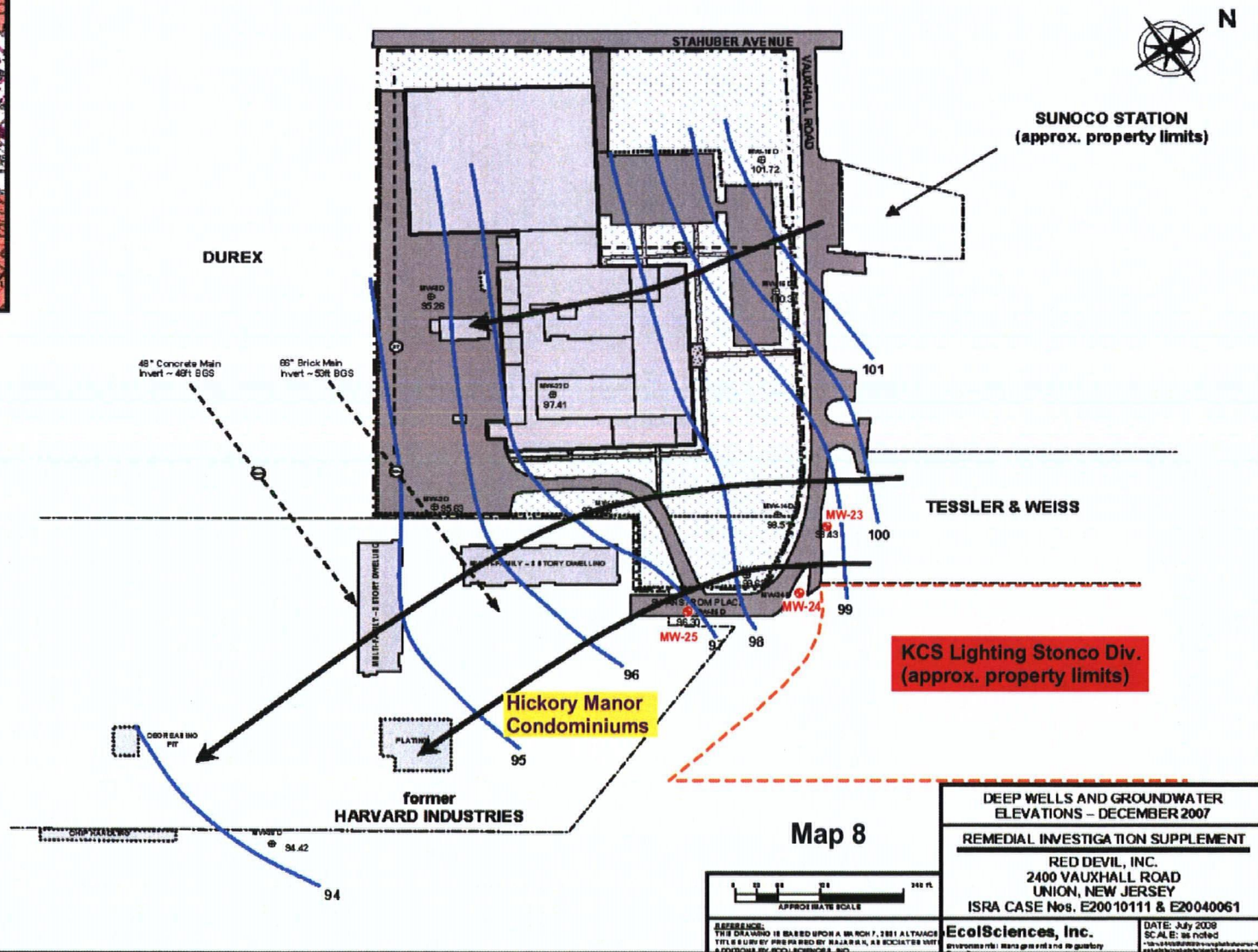


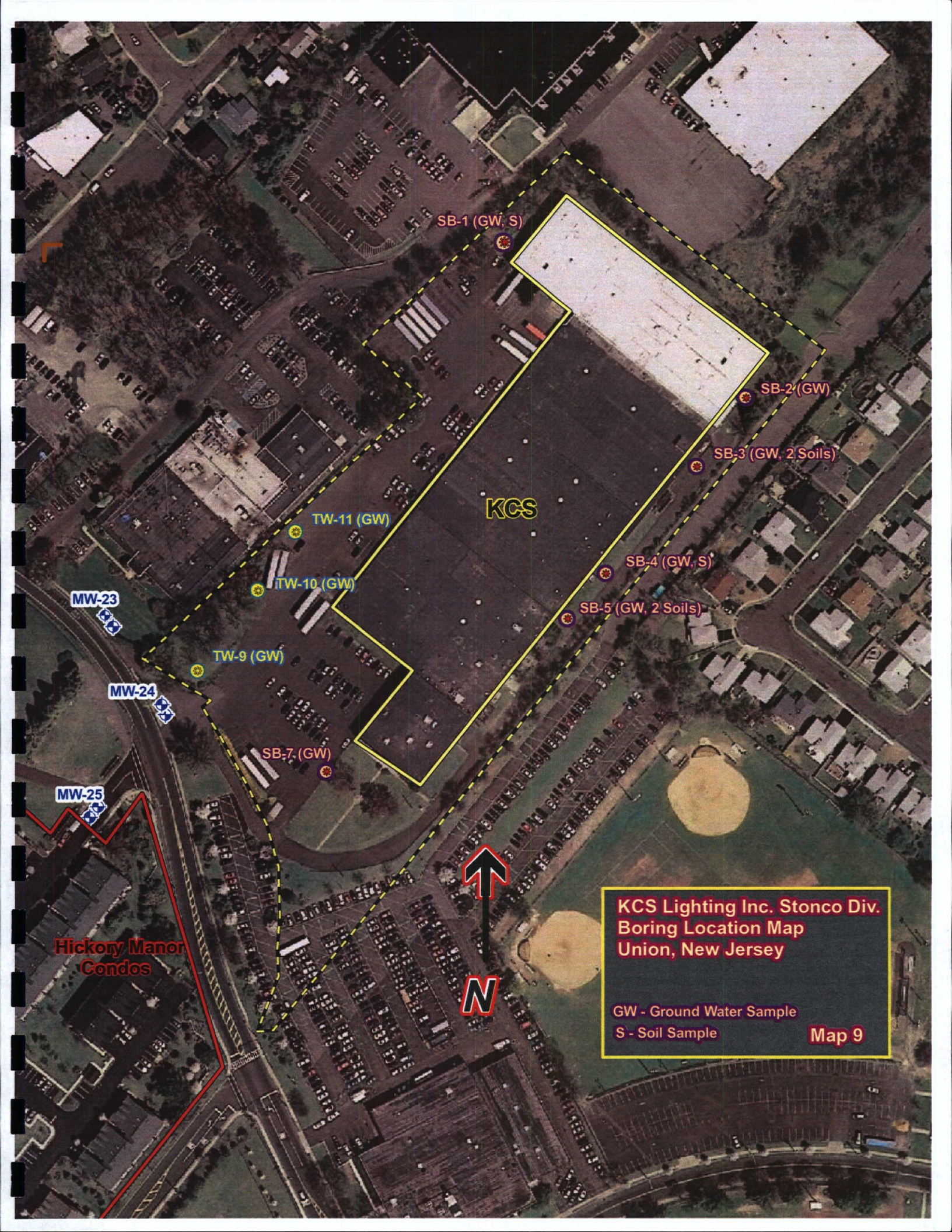
DECEMBER 2007
SHALLOW GROUNDWATER ELEVATIONS

8-1	00.74 amf
MW-1	05.95 amf
MW-2	07.40 amf
MW-3	05.64 amf
MW-4	05.53 amf
MW-5	05.35 amf
MW-6	04.91 amf
MW-7	05.79 amf
MW-8	05.34 amf
MW-9	05.45 amf
MW-10	05.60 amf
MW-11	05.23 amf
MW-12	05.64 amf
MW-13	03.75 amf
MW-14	07.28 amf
MW-15	03.35 amf
MW-16	07.12 amf
MW-17	05.73 amf
MW-18	07.00 amf
MW-19	05.92 amf

NOTES:
Contours drawn with computer assistance using
kriging interpolation method with default settings.







SB-1 (GW, S)

SB-2 (GW)

SB-3 (GW, 2 Soils)

KCS

TW-11 (GW)

TW-10 (GW)

SB-4 (GW, S)

SB-5 (GW, 2 Soils)

TW-9 (GW)

SB-7 (GW)

MW-23

MW-24

MW-25

Hickory Manor
Condos



KCS Lighting Inc. Stonco Div.
Boring Location Map
Union, New Jersey

GW - Ground Water Sample
S - Soil Sample

Map 9



TCE in Ground Water Concentrations

**KCS Lighting - Stonco Div. 2010 Boring Info
and
Red Devil 2007 Monitoring Well Info**

1:1400

Map 10

100,000 GPD WATER WITHDRAWAL POINTS
WITHIN 5 Miles OF :

X : 554371

Y : 683189

SCALE : 1 : 63,360

PLOT PRODUCED BY :
NJDEP
WATER SUPPLY
BUREAU OF WATER ALLOCATION
P.O. Box 426
TRENTON, NJ 08625
DATE : 12/1/2010

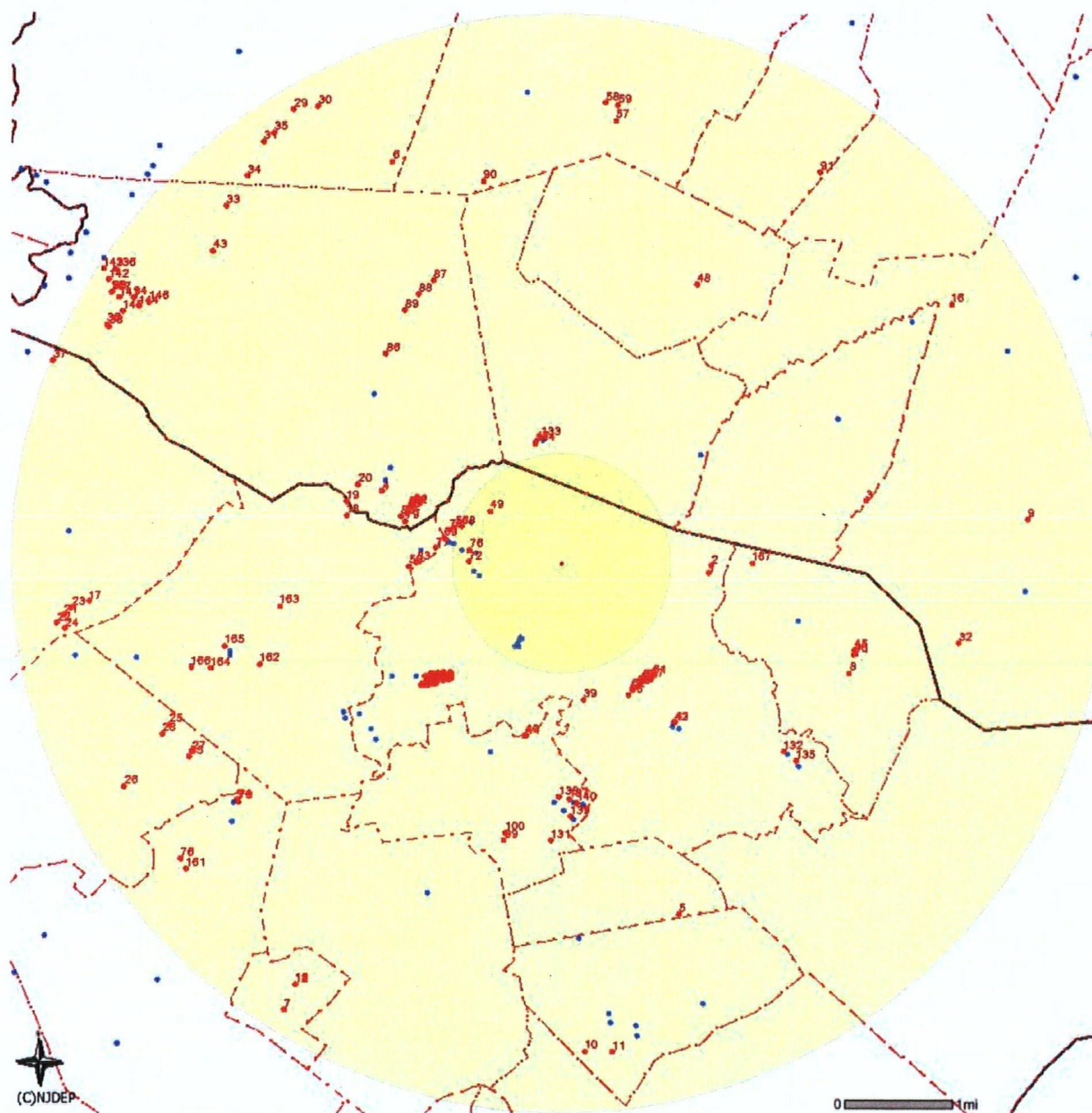
SUBJECT TO REVISION

Legend

• Water
Allocation,
Diversion and
Monitoring
Locations

--- Municipalities

□ Counties



MAP 11

Last refresh: 12/1/2010 04:13:18 PM

Withdrawal Points Tabular Data (SA)

Sequence Number	PI ID Number (Preferred NJEMS ID)	PI Name	SI Description	Distance from X/Y Origin (mi.)	Dep to Top of Open Interval + Units	Dep To Btm of Open Interval + Units	Z (Elevation)	Geologic Unit	Hydrogeologic Unit	Rate Pump Capac + Un Cod
49	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 48	0.81	65ft	200ft	99	4000 JTrp Passaic Formation	ba Brunswick aquifer	0gm
72	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 44	0.85			81	4000 JTrp Passaic Formation	ba Brunswick aquifer	0gm
76	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 41	0.86			85	4000 JTrp Passaic Formation	ba Brunswick aquifer	180gm
68	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 6L	0.98	25ft	35ft	85	4000 JTrp Passaic Formation	ba Brunswick aquifer	0gm
51	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 21R	1.04	52ft	130ft	81	4000 JTrp Passaic Formation	ba Brunswick aquifer	0gm
78	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 23	1.07			80	4000 JTrp Passaic Formation	ba Brunswick aquifer	0gm
69	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 2L	1.10	35ft	45ft	88	4000 JTrp Passaic Formation	ba Brunswick aquifer	190gm
77	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 32	1.17		200ft	78	4000 JTrp Passaic Formation	ba Brunswick aquifer	0gm
65	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 4A	1.29	44ft	125ft	63	400 Qsd Stratified drift	sg glacial sand and gravel	200gm
54	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 7A (HUMMOCKS)	1.31	65ft	326ft	60	4000 JTrp Passaic Formation	ba Brunswick aquifer	150gm
64	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 5A (HUMMOCKS)	1.31	49.5ft	128ft	57	400 Qsd Stratified drift	sg glacial sand and gravel	150gm
62	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 8A	1.31	68.2ft	125ft	54	400 Qsd Stratified drift	sg glacial sand and gravel	250gm

63	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 6AR	1.31	85ft	130ft	57	400 Qsd Stratified drift	sg glacial sand and gravel	300gm
61	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 17	1.32	101ft	111ft	64	400 Qsd Stratified drift	sg glacial sand and gravel	250gm
67	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL H2	1.33	80ft	100ft	59	400 Qsd Stratified drift	sg glacial sand and gravel	200gm
83	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 36	1.33	65ft	200ft	79	4000 JTrp Passaic Formation	ba Brunswick aquifer	130gm
66	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	COLLECTOR	1.34	97ft	98ft	54	400 Qsd Stratified drift	sg glacial sand and gravel	2500gm
50	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 47	1.40	65ft	200ft	80	4000 JTrp Passaic Formation	ba Brunswick aquifer	150gm
52	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 5A (SPRINGFIELD)	1.46	77ft	140ft	96	4000 JTrp Passaic Formation	ba Brunswick aquifer	215gm
84	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 7A (SPRINGFIELD)	1.47	75ft	140ft	89	4000 JTrp Passaic Formation	ba Brunswick aquifer	0gm
81	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 53	1.48	67ft	107ft	94	4000 JTrp Passaic Formation	ba Brunswick aquifer	400gm
55	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 1AR	1.48	52ft	72ft	94	400 Qsd Stratified drift	sg glacial sand and gravel	200gm
56	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 1A	1.49	71ft	142ft	94	400 Qsd Stratified drift	sg glacial sand and gravel	0gm
79	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 55	1.49	49ft	102.5ft	89	4000 JTrp Passaic Formation	ba Brunswick aquifer	320gm
60	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 6A	1.50	75ft	113ft	94	4000 JTrp Passaic Formation	ba Brunswick aquifer	350gm
53	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 2A	1.50	78ft	162ft	93	4000 JTrp Passaic Formation	ba Brunswick aquifer	140gm
		NJ AMERICAN						4000 JTrp		

82	5020X	WATER - RARITAN SYSTEM	WELL 50	1.50	65ft	200ft	95	Passaic Formation	ba Brunswick aquifer	0gm
80	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	WELL 54	1.54	47ft	97.5ft	94	4000 JTrp Passaic Formation	ba Brunswick aquifer	370gm
20	5008X	NJ AMERICAN WATER SHORT HILLS	KELLY C	2.00			103	400 Qsd Stratified drift	sg glacial sand and gravel	1042gm
18	5008X	NJ AMERICAN WATER SHORT HILLS	KELLY A	2.01			100	400 Qsd Stratified drift	sg glacial sand and gravel	1250gm
19	5008X	NJ AMERICAN WATER SHORT HILLS	KELLY B	2.05			99	400 Qsd Stratified drift	sg glacial sand and gravel	1250gm
86	5077	ORANGE CITY WATER DEPT	WELL 5	2.50	74ft	104ft	211.882	400 Qsd Stratified drift	sg glacial sand and gravel	700gm
100	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	QUINTON AVE WELL	2.50			93	4000 JTrp Passaic Formation	ba Brunswick aquifer	250gm
99	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	RICHFIELD AVE WELL	2.57			86	4000 JTrp Passaic Formation	ba Brunswick aquifer	250gm
89	5077	ORANGE CITY WATER DEPT	WELL 2	2.72			256	400 Qsd Stratified drift	sg glacial sand and gravel	700gm
88	5077	ORANGE CITY WATER DEPT	WELL 3	2.79			246	400 Qsd Stratified drift	sg glacial sand and gravel	1200gm
48	5073	SOUTH ORANGE VILLAGE TWP WATER DEPT	WELL 17	2.83	27.5ft	343ft	215	4000 JTrp Passaic Formation	ba Brunswick aquifer	400gm
87	5077	ORANGE CITY WATER DEPT	WELL 4	2.84			255	400 Qsd Stratified drift	sg glacial sand and gravel	1400gm
90	5077	ORANGE CITY WATER DEPT	WELL 6	3.55	74ft	125ft	333	400 Qsd Stratified drift	sg glacial sand and gravel	800gm
27	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	BRISTOL RD WELL	3.77			144	3070 Trb Brunswick Formation (superceded by Passaic, Feltville, Towaco, and Boonton Formations)	ba Brunswick aquifer	330gm
		NJ AMERICAN						3070 Trb Brunswick Formation (superceded		

25	5020X	WATER - RARITAN SYSTEM	CHARLES ST WELL 1	3.86			142	by Passaic, Feltville, Towaco, and Boonton Formations)	ba Brunswick aquifer	400gm
28	5020X	NJ AMERICAN WATER - RARITAN SYSTEM	CHARLES ST WELL 2	3.94			146	3070 Trb Brunswick Formation (superceded by Passaic, Feltville, Towaco, and Boonton Formations)	ba Brunswick aquifer	220gm

Page 1



0 80 160 320 480 640 Feet

Legend

Flood Hazard Areas (FEMA-DFIRM)

Legend

-  100-Year Flood
-  500-Year Flood
-  Floodway

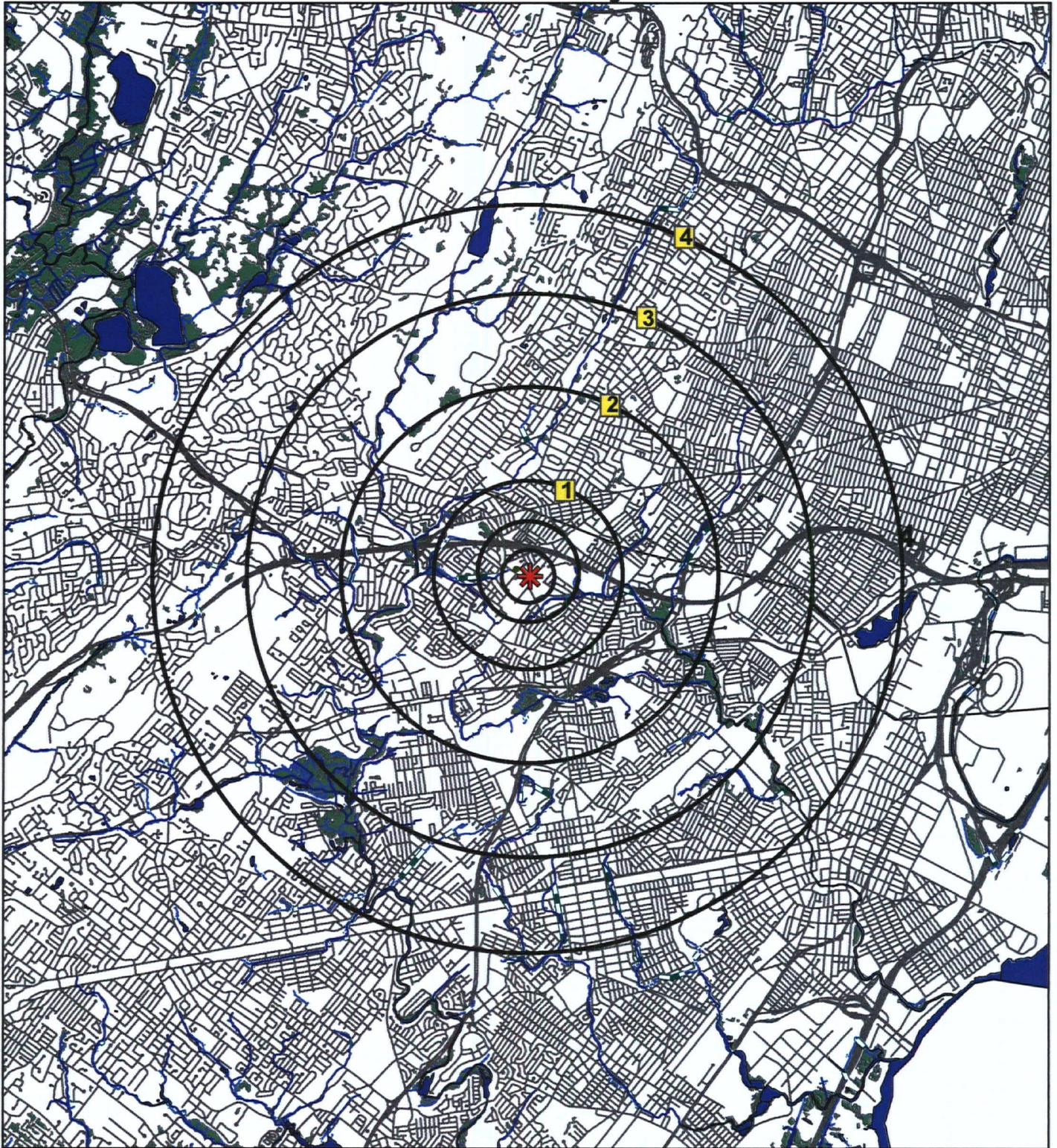


**KCS Lighting - Stonco Division
Union, New Jersey**

Flood Hazard Map

Map 12

Map 13 Wetlands Map
KCS Lighting - Stonco Div.
Union Twp., Union County
40.708795 lat - 74.275461 long.
New Jersey



0 0.5 1 2 Miles

Map 14 Population Map
KCS Lighting - Stonco Div.
Union Twp., Union County
40.708795 lat - 74.275461 long.
New Jersey



Ring 1	(0.00 - 0.25)	has Population:	646
Ring 2	(0.25 - 0.50)	has Population:	4,771
Ring 3	(0.50 - 1.00)	has Population:	19,923
Ring 4	(1.00 - 2.00)	has Population:	60,639
Ring 5	(2.00 - 3.00)	has Population:	111,253
Ring 6	(3.00 - 4.00)	has Population:	190,901

0 0.5 1 2 Miles

* Based on 2000 Census Data



SB-1 (GW, S)

SB-2 (GW)

SB-3 (GW, 2 Soils)

AOC 2

SB-4 (GW, S)

SB-5 (GW, 2 Soils)

AOC 1

Single Family
Housing

TW-11 (GW)

TW-10 (GW)

TW-9 (GW)

SB-7 (GW)

KCS Lighting Inc. Stonco Div.
Area of Vapor Intrusion Potential
Union, New Jersey

Map 15

Attachment A

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
P.O. Box 435, TRENTON, NJ 08625-0435

PRELIMINARY ASSESSMENT REPORT

Answer all questions. Should you encounter any problems in completing this form, we recommend that you discuss the matter with a representative from the Site Remediation Program. Submitting incorrect or insufficient data may cause processing delays and possible postponement of your transaction

PLEASE PRINT OR TYPE

Date: October 1, 1999Industrial Establishment/Site Name Stonco LightingAddress 2345 Vauxhall RoadCity or Town Union TownshipZip Code 07083Municipality Union TownshipCounty UnionBlock (s) 35Lots (s) 5609Source: Union Township Tax DepartmentSite Remediation Program Case Number or EPA Identification Number NJD053513644

1. Present a history of ownership and operations at the industrial establishment, in tabular form, from the time the site was naturally vegetated or utilized as farmland in accordance with N.J.A.C. 7:26E-3.1(c)1.i. (attach additional sheets as necessary).

Name of Property Owner	From	To
The Estate of Caroline A. Foster	Pre-1857	9/27/39
Leandro Gallini and Evelyn Gallini	9/27/39	8/13/53
J.L. Hammett Company	8/13/53	8/31/79
Keene Corporation	8/31/79	7/31/84
KCS Lighting, Inc.	7/31/84	8/19/92
The Genlyte Group, Inc.	8/19/92	Present

Name of Operator	From	To
Property apparently not developed until 1953	Pre-1857	8/13/53
A.P.W. Products Co., Inc./Hazel Bishop Company	8/13/53	8/31/79
Stonco	8/31/79	Present

Additional ownership information is provided on Page 1 of Attachment 1.

- 2A. In accordance with N.J.A.C. 7:26E-3.1(c)1.ii, provide a clear and concise description of the past industrial/commercial operation(s) conducted on site by each owner and operator. To the extent available the site history shall include an evaluation of the following sources of information:

(1) Sanborn Fire Insurance Maps; (2) MacRae's Industrial Directory; (3) Title and Deed; (4) Site plans and facility as-built drawings; (5) federal, state, county and local government files; (6) The Department Geographic Information System. (7) and any additional sources which may be available for a specific site.

Site history is frequently an item where preliminary assessments are incomplete. The Industrial Site Recovery Act requires that a diligent inquiry be made, researching the site history back to January 1, 1932. Common answers to this question have included: "Unknown", or "We are only a tenant on the site and have no knowledge of prior site history". Neither of these answers satisfies the requirement for a due diligent inquiry.

To avoid having a PA found incomplete by the Department due to insufficient information, the site history must be researched. The following are ways of obtaining information regarding site history: title searches; contacting the local and county health officials and municipal agencies (for example, local fire and police departments, and local planning, zoning, adjustment boards) requesting any information these public agencies may have on the specific location; and, interviewing long time neighbors of the industrial establishment. Tenants should always request information from the landlord. The applicant should always document any attempts to locate this information to support a claim that a diligent inquiry has been conducted. If the prior site history demonstrates that the current building was built on vacant unimproved property, it should be reported as such. If the site has been, or is now the subject of a site remediation, any prior cases should always be referenced.

Provide the page or appendix number where the site history may be found. Attachment 1, Page 4

Provide a listing of the resources utilized to compile the site history and as appropriate copies of any maps or information, which will assist the Department in evaluating your conclusions.

Name of Resource	Date of Document Reviewed	Appendix # If Providing Copies
See Narrative on pages 1 through 3 of Attachment 1.		

- 2B. Include a detailed description of the most recent operations subject to this preliminary assessment.
- Provide the page or appendix # where the description of the most recent operations may be found.
Attachment 1, Page 4

3. Hazardous Substance/Waste Inventory: N.J.A.C. 7:26E-3.1(c)1.iii. List all raw materials, finished-products, formulations and hazardous substances, hazardous wastes, hazardous constituents and pollutants, including intermediates and by-products that are or were historically present on the site. Note: If past usage included farming, pesticides may be a concern and should be included in this list. (Attach additional sheets if necessary.)

Material Name	CAS # If Known	Typical Annual Usage (Gallons/lbs.)	Storage Method (i.e., Drum, Tank, Jars)
See Narrative on page 4 of Attachment 1, and Attachment 2 that includes: the Community Right to Know Survey for 1997 and the 1997 Chemical Inventory Report			

- 4A. In accordance with N.J.A.C. 7:26E-3.1(c)1iv, provide a summary of all current and historic wastewater discharges of Sanitary and/or Industrial Waste and/or sanitary sludges. Present and past production processes, including dates, and their respective water use shall be identified and evaluated, including ultimate and potential discharge and disposal points and how and where materials are or were received on-site. All discharge and disposal points shall be clearly depicted on a scaled site map.

Information required under this item is intended to identify potential discharges to any on-site disposal system, such as a septic system or lagoon or drywell. As an example, a facility that currently discharges sanitary and other wastes to the public sewer system, but maintained an on-site septic system prior to 1976, would complete this item as follows:

Site Information

Discharge Period		Discharge Type	Discharge Location
From	To		
Beginning Operations	Present	Sanitary	Joint meeting of Essex and Union Counties
		Stormwater	

- 4B. Provide a narrative of disposal processes for all historic and current process waste streams and disposal points. (Attach additional sheets if necessary.)

All process waste streams from the Stonco facility can be classified into one of four categories: recyclable trash, general trash, hazardous waste, and wastewater. Narrative continued on page 4 of Attachment 1.

5. This question requires the applicant to conduct a diligent inquiry into the current and historic operations at the site to identify all of the potential areas of concern, which formerly or currently exists at the industrial establishment as defined in N.J.A.C. 7:26E-1.8.

Diligent Inquiry as defined in N.J.A.C. 7:26E-1.8 states:

A. Conducting a diligent search of all documents which are reasonably likely to contain information related to the object of the inquiry, which documents are in such person's possession, custody or control, or in the possession, custody or control of any other person from whom the person conducting the search has a legal right to obtain such documents; and

B. Making reasonable inquiries of current and former employees and agents whose duties include or included any responsibility for hazardous substances, hazardous wastes, hazardous constituents, or pollutants, and any other current and former employees or agents who may have knowledge or documents relevant to the inquiry.

In accordance with N.J.A.C. 7:26E3.1(c)1.v., a narrative shall be provided for each area of environmental concern describing the (A) Type; (B) Age; (C) Dimensions of each container/area; (D) Chemical Content; (E) Volume; (F) Construction materials; (G) Location; (H) Integrity (i.e., tank test reports, description of drum storage pad); and (I) Inventory control records, unless a Department-approved leak detection system, pursuant to N.J.A.C. 7:1E or 7:14B, has always been in place and there is no discharge history. If sampling is not proposed for any identified area of environmental concern, please explain why it is believed that the area of environmental concern does not contain contaminants above the applicable remediation standards. Submit all necessary documentation to verify this belief. The required narrative need not describe the sampling to be completed; however, it should state that sampling will be completed in accordance with the appropriate section of N.J.A.C. 7:26E. Detailed descriptions of all remediation activities shall be described in the site investigation report in accordance with N.J.A.C. 7:26E-3.13. Note: If the industrial establishment has multiple locations for one type of area of concern (example: underground storage tanks are located in 3 separate areas of the facility), each area must be discussed separately.

Please indicate if any of the potential areas of environmental concern listed below in #5A through #5G, as defined in N.J.A.C. 7:26E-1.8, formerly or currently exist at the industrial establishment by indicating Yes or No in the appropriate space as provided.

For the Location Reference Keyed to Site Map, use either a number or letter identification and be consistent throughout each phase of the remediation, referring to the same identification provided herein.

Provide the required narrative as an appendix to this report. Do not try to provide a narrative in the space provided.

I hereby certify that a diligent inquiry has been conducted to identify all current and historical potential areas of environmental concern and based on the diligent inquiry the areas of environmental concern identified below in question 5A through 5G are the only areas of environmental concern believed to exist at the above referenced industrial establishment.

A. Bulk Storage Tanks and Appurtenances, Including, without limitation:

Area of Concern	Currently or Formerly Exists at the Site Yes/No	Location Referenced to the Site Map	Attachment Number
Aboveground Storage Tanks and Associated Piping	Yes	Yes	Attachment 1, Page 5
Underground Storage Tanks and Associated Piping	Yes	Yes	Attachment 1, Page 5
Silos	No	No	Attachment 1, Page 4
Rail Spurs or Sidings	Yes	Yes	Attachment 1, Page 5
Loading and Unloading Areas	Yes	Yes	Attachment 1, Page 5
Piping, Aboveground and Belowground Pumping Stations, Sumps and Pits	No	No	Attachment 1, Page 4

B. Storage and Staging Areas, Including, without limitation:

Area of Concern	Currently or Formerly Exists at the Site Yes/No	Location Referenced to the Site Map	Attachment Number
Storage Pads, Including Drum and/or Waste Storage	No	No	Attachment 1, Page 5
Surface Impoundments and Lagoons	No	No	Attachment 1, Page 5
Dumpsters	Yes	Yes	Attachment 1, Page 6
Chemical Storage Cabinets or Closets	Yes	Yes	Attachment 1, Page 6

C. Drainage Systems and Areas, Including, without limitation:

Area of Concern	Currently or Formerly Exists at the Site Yes/No	Location Referenced to the Site Map	Attachment Number
Floor Drains Trenches, and Piping and Sumps	Yes	Yes	Attachment 1, Page 7
Process Area Sinks and Piping Which Receive Process Waste	No	No	Attachment 1, Page 7
Roof Leaders When Process Operations Vent to the Roof	Yes	No	Attachment 1, Page 7
Drainage Swales and Culverts	No	No	Attachment 1, Page 7
Storm Sewer Collection Systems	Yes	Yes	Attachment 1, Page 7
Stormwater Detention Ponds and Fire Ponds	No	No	Attachment 1, Page 7
Surface Water Bodies	No	No	Attachment 1, Page 7
Septic Systems Leachfields or Seepage Pits	No	No	Attachment 1, Page 7
Dry Wells and Sumps	No	No	Attachment 1, Page 7

D. Discharge and Disposal Areas, including, without limitation:

Area of Concern	Currently or Formerly Exists at the Site Yes/No	Location Referenced to the Site Map	Attachment Number
Waste Piles	No	No	Attachment 1, Page 7
Landfills or Landfarms	No	No	Attachment 1, Page 7
Sprayfields	No	No	Attachment 1, Page 7
Incinerators	No	No	Attachment 1, Page 7
Open Pipe Discharges	No	No	Attachment 1, Page 7

E. Other Areas of Concern, including, without limitation:

Area of Concern	Currently or Formerly Exists at the Site Yes/No	Location Referenced to the Site Map	Attachment Number
Electrical Transformers and Capacitors	Yes	Yes	Attachment 1, Page 7
Discolored or Spill Areas	No	No	Attachment 1, Page 7
Areas of Stressed Vegetation	No	No	Attachment 1, Page 7
Underground Piping, Including Industrial Process Sewers	No	No	Attachment 1, Page 7
Compressor Vent Discharges	Yes	No	Attachment 1, Page 7
Non-Contact Cooling Water Discharges	No	No	Attachment 1, Page 7
Active or Inactive Production Wells	No	No	Attachment 1, Page 7

F. Building Interior Areas with a Potential for Discharge to the Environment, including, without limitation:

Area of Concern	Currently or Formerly Exists at the Site Yes/No	Location Referenced to the Site Map	Attachment Number
Loading or Transfer Areas	No	No	Attachment 1, Page 8
Waste Treatment Areas	No	No	Attachment 1, Page 8
Boiler Rooms	No	No	Attachment 1, Page 8
Air Vents and Ducts	No	No	Attachment 1, Page 9
Hazardous Material Storage or Handling Areas	Yes	Yes	Attachment 1, Page 9

G. Any Other Site-Specific Area of Concern:

Area of Concern	Currently or Formerly Exists at the Site Yes/No	Location Referenced to the Site Map	Attachment Number

6. If the site area exceeds two acres, an interpretation of the aerial photographic history of the site shall be submitted in accordance with N.J.A.C. 7:26E-3.1(c)1.vi. The interpretation shall be based on available current and historical color, black and white and infrared aerial photographs (scale 1:18,000 or less) of the site and surrounding area at a frequency that provides the evaluator with a historical perspective of site activities. The photographic history shall date back to 1932 or the earliest photograph available. Aerial photographs are available for review at the New Jersey Department of Environmental Protection, Tidelands Management Program, Aerial Photo Library, 9 Ewing Street, Trenton, New Jersey (609) 633-7369. Note, the applicant is not required to provide the Department with copies of the aerial photographs reviewed only an interpretation of what was observed in each photograph, which may represent an environmental concern.

_____ Check here if an aerial photo review was not complete and provide a reason .

Provide the attachment number for the air photo review narratives Attachment 1, Page 11

7. Discharge History of Hazardous Substances and Wastes, N.J.A.C. 7:26E-3.1(c)1.vii:
- A. Have there been any known discharges of hazardous substances and wastes at the site?
X No (Go to question #8) _____ Yes (Complete Items 7B & 7C)
- B. Was the Department notified of the discharge?
_____ Yes _____ No
- If yes, provide the Case # _____
- C. Was a no-further-action letter, negative-declaration approval or full-compliance letter issued as a result of the cleanup of this discharge?
_____ Yes (Submit a copy of the no-further-action approval)
_____ No (Submit a complete Site Investigation or Remedial Action Report documenting the action taken to address the discharge)

8. In accordance with N.J.A.C. 7:26E-3.1 (c) 1.vii, provide a description of any remediation activities previously conducted or currently underway at the site, including dates of discharges, remedial actions taken, and all existing sample results concerning contaminants which remain at the site. Copies of Department or other governmental agency no-further-action approvals should also be provided with a description of the areas to which the no-further-action approvals apply. This information is especially important if the approval was granted for the remediation of a portion of a site or a specific discharge event rather than the entire site subject to this preliminary assessment.
- X Check here if this question does not apply.

Provide the appendix number for the required narrative and data summary _____

9. Protectiveness of past remedies, Order of Magnitude Analysis, N.J.A.C. 7:26E-3.1(c) 1.ix & N.J.A.C. 7:26E, 3.2(a)5
- A. Have any areas of concern previously received a No-Further-Action approval from the Department or other equivalent government agency for which no additional remediation is proposed? X No (go to question #10). _____ Yes (complete 9B).

B. In accordance with N.J.A.C. 17:27A 58:10B-13(e) the following evaluation of the protectiveness of past remedies shall be completed for all areas of concern for which no further action was previously approved by the Department or other equivalent government agency and for which no additional remediation is proposed. All final sampling results shall be evaluated to determine if contaminant levels remaining on site are in compliance with current remediation criteria. The applicant shall complete the following:

Include a table comparing the levels of contaminants remaining in each area of concern, the numerical remediation standard approved in the remedial action workplan or at the time of no-further-action approval and the numerical remediation standards applicable at the time of the comparison. The table shall contain all sampling results, including sample location, sample media, field and laboratory identification numbers, and method detection limits, as necessary, and analytical results for all individual contaminants for each area of concern.

I hereby certify that the order of magnitude analysis required pursuant to N.J.A.C. 7:26E has been completed, since the issuance of a No-Further-Action approval, negative declaration approval or equivalent remediation approval; and (Check the appropriate statements (1), (2), (3) or (4))

(1) _____ The areas of concern listed below contain contaminants above the numerical remediation standard applicable at the time of the comparison, however no further action is required because: (check the appropriate sub statement)

_____ (a) The contaminant concentrations remaining in the areas of concern listed below are less than an order of magnitude (factor of 10) greater than the numerical remediation standard applicable at the time of the comparison;

_____ (b) The areas of concern or the site was remediated using engineering and institutional controls approved by the Department and these controls are still protective of public health, safety and the environment; or

_____ (c) The area of concern or the site was remediated to an approved site specific remediation standard and all of the factors and assumptions which are the basis for deriving the site specific remediation standard remain valid for the site.

Please list the areas of concern for which the previous statement applies.

Area of Concern	Location Reference Keyed to the Site Map

(2) _____ The areas of concern listed below contain contaminants above the numerical remediation standard applicable at the time of the comparison and further remediation is required because: (check the appropriate sub statement)

_____ (a) The contaminant concentrations remaining in the areas of concern listed below are more than an order of magnitude (factor of 10) greater than the numerical remediation standard applicable at the time of the comparison;

_____ (b) The areas of concern or the site was remediated using engineering and institutional controls approved by the Department and these controls are no longer protective of public health, safety and the environment; or

_____ (c) The area of concern or the site was remediated to an approved site specific remediation standard and some or all of the factors and assumptions which are the basis for deriving the site specific remediation standard are no longer valid;

Please list the areas of concern for which the previous statement applies.

Area of Concern	Location Reference Keyed to the Site Map

(3) The areas of concern listed below do not contain contaminants above the numerical remediation standard applicable at the time of the comparison and no further remediation is required.

Please list the areas of concern for which the previous statement applies.

Area of Concern	Location Reference Keyed to the Site Map

(4) The contaminant concentrations remaining in the below listed areas of concern are more than an order of magnitude greater than the numerical remediation standard applicable at the time of the comparison. However, no further remediation is required by the person conducting this preliminary assessment, because, in accordance with N.J.S.A. 58:10B13(e), that person is not liable for the contamination pursuant to N.J.S.A. 58:10-23.11g

Please list the areas of concern for which the previous statement applies.

Area of Concern	Location Reference Keyed to the Site Map

10. Historical Data on environmental quality at the Industrial Establishment

A. Have any previous sampling results documenting environmental quality of the Industrial Establishment not received a no further action approval from the Department or been denied approval by the Department? (N.J.A.C. 7:26E-3.1(c)1.viii)

_____ Yes (See Attachment # _____) ☒ No (Go to 11)

B. Have there been any known changes in site conditions or new information developed since completion of previous sampling or remediation? If sampling results were obtained, but are not part of this application, please explain below (N.J.A.C. 7:26E-3.1(c)xd):

Not applicable.

11. List all federal, state and local environmental permits at this facility, including permits for all previous and current owners or operators, applied for, received, or both (Attach additional sheets if necessary).

Check here if no permits are involved _____

A. New Jersey Air Pollution Control

Permit Number	Expiration Date	Type of Permitted Unit
1	3/28/93	
2	7/9/99	
3	5/31/98	
4	3/16/97	
5	3/16/97	
6	3/16/97	
7	1/21/97	
8	8/25/94	
9	3/5/97	
10	12/11/96	

B. Underground Storage Tank Registration Number Not applicable.

Size of Tank (Gallons)	Tank Contents

C. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit

Permit Number	Discharge Type	Discharge Location Keyed to Site map	Expiration Date
Not applicable.			

D. Resource Conservation and Recovery Act (RCRA) permit # Not applicable.

E. EPA Identification Number _____

F. In accordance with N.J.A.C. 7:26E-3.1(c) xii, list all other federal, state, local government environmental permits for all previous and current owners or operators applied for and/or received for the site including :

- (1) Name and address of the permitting agency
- (2) The reason for the permit
- (3) The permit identification number
- (4) The application date
- (5) The date of approval, denial or status of the application
- (6) The name and current address of the permittees
- (7) The reason for the denial, revocation or suspension if applicable
- (8) The permit expiration date

_____ Check here if no other environmental permits were applied for or received for this site.

Agency Issuing Permit	Permit No.	Type of Permit	Date of Approval or Denial	Expiration Date
Joint Meeting	7105-Stonco Lighting	Sanitary Sewer Discharge		

12. In accordance with N.J.A.C. 7:26E-3.1(c)xiii, provide a summary of enforcement actions (including but not limited to, Notice of Violations, Court Orders, official notices or directives) for violations of environmental laws or regulations (attach additional sheets if necessary):

A. Check here if no enforcement actions are involved _____ (Go to 13 otherwise complete 12B)

B. (1) Name and address of agency that initiated the enforcement action

Joint Meeting of Essex and Union Counties

500 South First Street

Elizabeth, NJ 0702

(2) Date of the enforcement action March 10, 1998

(3) Section of statute, rule or permit allegedly violated Permit exceedance

(4) Type of enforcement Administrative Notice

(5) Description of the violation.

Elevated concentrations of zinc detected in sanitary sewer discharge, above permit levels.

(8) How was the violation resolved?

Source of zinc identified as residue from the paint hook cleaning process which was being transferred into the part wash system and then into the sanitary sewer system. This cleaning process was discontinued. No further violations.

13. In accordance with N.J.A.C. 7:26E-3.1(c) xiv, please provide a narrative description of all areas where non-indigenous fill materials were used to replace soil or raise the topographic elevation of the site, including the dates of emplacement. Not applicable.
14. A. In accordance with N.J.A.C. 7:26E-3.2(a) 3.i, submit a scaled site plan, detailing the subject lot and block, property and or leasehold boundaries, location of current and former buildings, fill areas, paved and unpaved areas, vegetated areas, and all areas of concern identified above and all active or inactive wells.
- B. Scaled historical site maps and facility as built drawings (if available).
- C. A copy of the United States Geologic Survey (USGS) 7.5 minute topographical quadrangle that includes the site and an area of at least one mile radius around the site. The facility location shall be clearly noted. If a portion of the USGS quadrangle is used, the scale, north arrow, contour interval, longitude and latitude with the name and date of the USGS quadrangle shall be noted on the map.
15. In accordance with N.J.A.C. 7:26E-3.2, please provide the date that the site visit was completed to verify the findings of the preliminary assessment. _____
16. List any other information you are submitting or which has been formerly requested by the Department:

Detailed Responses and Narratives for PA Checklist Line Items	
Community Right-to-Know Survey for 1997 and 1997 Chemical Inventory Report	1
Environmental Information Database Search from VISTA Information Solutions, Inc.	2
Title Search Results	3
Site Investigation (SI) Report	4
	5

CERTIFICATION:

The following certification shall be signed by the highest-ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information, and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Typed/Printed Name _____ Title _____

Signature _____ Date _____

Sworn to and Subscribed Before Me on this _____

Date of _____ 19____

Notary

**ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY**

The operational and ownership history of the Stonco Facility was researched in accordance with N.J.A.C. 7:26E-3.1. The sources of these data include:

- Sanborn Fire Insurance Maps;
- MacRae's Industrial Directory;
- Title and Deed search;
- Federal and state database searches;
- Aerial photograph search and review;
- Available site plan and drawing review;
- Site visit/visual inspection; and
- Interviews with long-term employees.

The following subsections detail the information obtained by this research.

Sanborn Fire Insurance Maps

A database search was made to identify the availability of Sanborn Fire Insurance Maps. The extent of applicable Sanborn Maps was limited to the years 1958, 1964, and 1968. These were located and examined for evidence to support the history of the site. The 1958 map shows the main building with a smaller (100'x35') steel frame building located in the northern corner of the property. It is believed that the smaller building was used for additional warehouse space. The map indicates that the main building was constructed in 1953, was then operated by the A.P.W. Products Co. Inc. and was used for paper goods manufacturing. The map also shows a rail siding, and the locations of the Boiler Room and outside electrical transformers. The 1964 and 1968 maps show identical site conditions to the 1958 map, with the exception that they show the changed operator of the property. These maps show the property as being operated by the Hazel Bishop Co. Inc., and that it was used for the manufacturing of cosmetics. This is consistent with the known history of the site.

MacRae's Industrial Directory

Pursuant to N.J.A.C. 7:26E-3.1(C)1, I item (2), MacRae's State Industrial Directory was contacted. While basic company information is available, no environment-related information was identified from this source.

Title and Deed Search

This information was used to develop responses to Question 1 of the PAR. Prior to 1939, the property was owned by the estate of Caroline A. Foster and was apparently not developed. Title to the property was transferred to Leandro and Evelyn Gallini on 9/27/39, who held the property until 8/13/53, when they sold it to the J.L. Hammett Company. The main building which is currently on-site was apparently constructed in 1953, presumably by the J.L. Hammett Company. During the J.L. Hammett Company's ownership, the property was operated by A.P.W. Products Co. Inc. and later by the Hazel Bishop Company. The J.L. Hammett Company sold the property to the Keene Corporation on 8/31/79. KCS Lighting Inc. acquired the assets of Keene Lighting Products divisions of Keene Corporation on or about July 25, 1984. KCS Lighting, Inc. was merged into the Genlyte Group Inc. on June 20, 1986, with property-ownership being transferred on 8/19/92. The Facility was operated by the Stonco Lighting Division (Stonco) since 1979. Title and Deed search information is included as Attachment 4.

Environmental Information Data Base Search

A search of federal and state environmental information databases was conducted by a subcontractor (VISTA Information Solutions, Inc.) to identify if the property was included in any of these databases, as an indication of reported potential environmental impacts. All sites where environmental impacts may have occurred within a 1.5-mile radius of the property were also identified. A summary map displaying this information is shown in Attachment 3. A total of 149 sites were identified within a 5/8-mile radius of the property as follows:

**ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY**

Database	Database System Date	Number of Identifications
USEPA NPL - National Priorities List	4/98	0
USEPA CORRACTS - Resource Conservation and Recovery Information System - Treatment, Storage and Disposal Facilities Subject to Corrective Action	2/98	2
STATE SPL - New Jersey Equivalent Priority List	10/96	0
STATE SCL - New Jersey Equivalent CERCLIS list	1/98	14
USEPA TSD - Resource Conservation and Recovery Information System Permitted Treatment, Storage and Disposal Facilities	2/98	0
USEPA CERCLIS/NFRAP - Comprehensive Environmental Response, Compensation and Liability Information System /No Further Action Planned Report - aka. CERCLIS archive	2/98	4
STATE REG CO LUST - New Jersey Leaking Underground Storage Tank Report	2/98	28
STATE REG CO SWLF - New Jersey Solid Waste Landfill Report	2/98	0
USEPA GNRTR - Resource Conservation and Recovery Information System - Small Quantity and Large Quantity Generators	2/98	29
USEPA TRI - Toxic Release Inventory System of 1992	12/96	5
USEPA RCRA VIOL - RCRA Violations/Enforcement Actions	2/98	8
STATE UST/AST - New Jersey Registered Aboveground or Underground Storage Tanks	11/97	34
STATE SPILLS - State Spills List	2/98	21
ERNS - Emergency Response Notification System of 1993	1/98	4
		149

The Stonco Facility is included on the USEPA GNRTR list.

The number of sites identified in relatively close proximity to the Stonco Facility is indicative of the urban nature and industrial presence in the area. It is not, however, necessarily indicative of a particular environmental impact to this property.

**ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY**

A search for commercially available aerial photographs was completed. Four photographs were selected to represent the developmental history of the site. The aerial photographs support the conclusion that the property was developed prior to Stonco's occupation and that Stonco's operations were limited to the areas viewed at the time of the Site Visit, with the exception of an outbuilding (six car garage) which was raised prior to 1985 during the construction of additional warehouse space. No evidence of disposal activities or surface staining was identified. A detailed review of the photographs is presented in the response to Question 6 of the PAR.

A review of the Facility's files was performed to identify all available site plans and drawings containing relevant information. While building utility plans have been re-created, only limited historical process drawings remain for Stonco operations. No historical plans were located from prior operators of the property.

A site visit/visual inspection was conducted to identify and confirm potential environmental Areas of Concern (AOC). Site visits were conducted on April 16/17 and June 4, 1998. The data developed by these inspections is represented in the following sections. For reference during the discussion of the site visit and as pertains to past operations, the Facility includes: the main building; parking areas located to the west of the main building; an area located to the north of the main building which once featured a steel framed building; a driveway located to the east of the main building; and a fire water pumphouse located to the southwest of the main building. The main building interior space is subdivided as follows:

- The southwestern 14% of the building is used primarily for offices related to sales, and administrative purposes, as well as a cafeteria for employees;
- The central 64% of the Facility is the Manufacturing Area, which includes the shipping and receiving departments, the "Dry Paint Room", the "Wet Paint Room", the "Machine Shop", the former "Boiler Room", the "Assembly Area" the "Chemical Storage Area" and the "Hazardous Waste Storage Area";
- The remaining 22% of the building is used for warehousing/storage operations.

Interviews with employees familiar with site operations were completed during the Site Visit. The information obtained from the interviews was used to supplement the documented history of the site.

RESPONSE TO QUESTIONS 2a. PAGE 2 OF THE PAR

Prior to 1953, the property was apparently not developed. The buildings were erected in 1953, and were presumably operated from that point onward. Prior to 1958, the property was apparently used for processes related to paper goods manufacturing, presumably associated with the J.L. Hammett Company operation located to the northeast. Nothing is known about these operations. Immediately prior to Stonco's occupation of the building, the plant was reportedly used for the manufacturing and warehousing of water-based cosmetics and toothpaste, as identified by two former Hazel Bishop employees. No records were identified to provide further detail on these operations.

RESPONSE TO QUESTION 2b. PAGE 2 OF THE PAR

The Stonco facility includes administrative, manufacturing and warehousing operations related to the manufacture and distribution of lighting products and components, particularly outdoor and industrial housings and components. Supplies, parts, and electronic components (e.g., wire, light bulbs, wire nuts, etc.) are delivered to the receiving area and either stored there or moved directly to the Work In Progress (WIP) storage areas that are situated throughout the assembly area.

Pre-cast electrical housings and parts are delivered by the supplier to the Facility's receiving department. Most (90%) of the cast housings are then brought to the "Paint Room" where they are washed and then coated, using dry electrostatic deposition with baking enamel. In some instances, minor machining of the castings or custom coating is necessary. In these instances, the castings are sent to either, the "Machine Shop" prior to the Paint Room, or to the Wet Paint Room for custom coating. Coated parts then go to the WIP storage area or directly to the assembly line,

**ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY**

where the housings and components are assembled and packaged. The packaged product is then stored on pallets in the storage area prior to shipping.

CONTINUATION OF RESPONSE TO QUESTION 3, PAGE 2 OF THE PAR

The file custodian for the Stonco Facility was contacted and reports that limited records are available. The primary reason for this is the relatively environmentally innocuous nature of Facility operations and that there have been no environmental related incidents. The list of the substances typically used/stored at the Facility was compiled from the Community Right to Know Survey and Chemical Inventory Reports for 1994 and is believed to be accurate. A list of the hazardous wastes typically generated by the Facility is provided by way of the NJDEP 1995 Hazardous Waste Report (Attachment 2).

CONTINUATION OF RESPONSE TO QUESTION 4B, PAGE 3 OF THE PAR

Recyclable trash (scrap metal, cardboard, paper, wooden pallets etc.), general trash (municipal refuse), and hazardous wastes are disposed of through certified haulers or recyclers. Waste recyclable paper products are consolidated in an on-site compactor located on the western side of the manufacturing area. The compactor is located on a paved area. Municipal refuse and trash are contained in an on-site dumpster, which is located near the hazardous waste storage area, on a paved area adjacent to the building. All waste chemicals and residuals associated with the painting process, part machining, equipment cleaning and maintenance were reportedly handled and managed as hazardous waste. These materials are accumulated into drums which are stored in the Hazardous Waste Storage area. All drums and chemicals are stored within portable secondary containment devices. The full drums are collected by a certified hazardous waste hauler for off-site disposal. There is no record of a discharge of a hazardous material from the Hazardous Waste Storage area.

From Stonco's occupation of the property to the present, water usage and wastewater discharges were limited to (in order of assumed volume) employee sanitary services (i.e., sink and toilet facilities), discharges from a pre-paint parts washer, and building maintenance (i.e., housekeeping and cleaning). All wastewater discharges are to the sanitary sewer system which is operated by the Joint Meeting of Essex and Union Counties. The pre-paint parts washer incorporates five stages (1: detergent wash (caustic), 2: acidic agent rinses and 2: water rinses). (The pre-paint parts washer is periodically cleaned of any non-liquid residuals by a certified contractor, who properly disposes of any residuals offsite.)

CONTINUATION OF RESPONSE TO QUESTION 5, PAGES 3 THROUGH 6 OF THE PAR

Pursuant to N.J.A.C. 7:26E-3.1(c)1.v., a detailed review of existing site documents, drawings, and aerial photographs has been conducted to identify potential AOCs. Specific items which are required by the NJDEP to be addressed are underlined. The location of each potential AOC is shown on Figure 2.

5A. Bulk Storage Tanks and Appurtenances:

Available records indicate that the following potential AOCs have never been present on the property:

- Silos; and
- Piping, aboveground and belowground pumping stations, sumps, and pits.

Available records indicate that the following potential AOCs have been, or are present on the property:

- Aboveground Tanks and Associated Piping;
- Underground Storage Tanks and Associated Piping;
- Railcars; and
- Loading and Unloading Areas.

ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY

Each of these potential AOCs are discussed in detail below.

Aboveground Tanks and Associated Piping

One aboveground tank (AST) exists at the facility. The tank holds approximately 50 gallons of diesel fuel for the backup fire pump. The tank is situated on a concrete floor, within a concrete block pump house. There is no evidence or record of a release from this tank. No SI activities are proposed regarding the diesel fuel AST.

Underground Storage Tanks and Associated Piping

Two underground storage tanks, associated with the boiler room, are reported to have existed at the Facility. These tanks reportedly had capacities of 10,000 gallons and 500 gallons, respectively and were used to contain No. 2 Fuel Oil. Documentation was found which indicates that the tanks were removed on December 15-16, 1985, and that they had not leaked. SI activities are planned to confirm these reports.

Rail Loading and Unloading Areas

Long term employee interviews and aerial photograph reviews suggest that at one time a rail siding had existed adjacent to a portion of the northeastern side of the Stonco Facility, as part of a previous owner's operation. (The Facility's southeastern border is a right-of-way for the former Rahway Valley Railroad.) The employees did not recall the rail siding ever being used by the Facility (or the Hazel Bishop Co.). The siding was removed when the rail line was abandoned.

While specific information regarding the use of the siding is not known, it is suspected that its purpose was related to the shipping of paper products (the primary business of the owner of the property prior to the Hazel Bishop Co.). Given the relative innocuousness of such materials and the lack of reported incidents, there is no reason to suspect that this area should be considered an AOC. No SI activities are proposed regarding the former rail spur.

Truck Loading and Unloading Areas

Three loading/unloading areas exist at the Facility. All are associated with shipping and receiving operations. One unloading area is located at the northern entrance to the Finished Good Storage Area. The second is located at the receiving department and is used to bring supplies into the Facility. The third area accesses the warehouse portion of the Facility where finished products are stored prior to shipping. These areas currently are and have historically been covered with either asphalt or concrete, which appeared at the time of the site visit to be original and in sound condition (e.g. no evidence of patching and no apparent cracks, spalling or staining). Given that there is no "bulk" (i.e., tank) storage of potentially hazardous materials at the Facility, handling of any such materials is limited to pre-packaged, barrel or smaller quantities, limiting the potential for a release in these areas. No reports of a discharge in these areas has been identified. Examination of the surfaces reveal no indication of a release. Consequently, additional investigation is not recommended. No SI activities are proposed regarding the truck loading/unloading areas.

SB. Storage and Staging Areas:

Available records indicate that the following potential AOCs have never been present on the property:

- Storage pads, including drum and/or waste storage; and
- Surface impoundments and lagoons.

**ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY**

Available records indicate that the following potential AOCs have been, or are, present on the property:

- Dumpsters; and
- Chemical storage cabinets or closets.

Each of these potential AOCs are discussed below.

Dumpsters

One dumpster and one paper/cardboard compactor are in use at the Facility to manage wastes. The areas currently are and appear to have historically been covered with either asphalt or concrete. These surface covers appeared at the time of the site visit to be original and in sound condition (e.g. no evidence of patching and no apparent cracks, spalling or staining). As hazardous wastes are reportedly manifested and disposed of by contracted NJDEP-licensed haulers, it is believed that the use of these features was limited to non-hazardous materials. No records of hazardous material storage, or disposal in either of these areas were identified. Examination of the surfaces reveal no indication of a release. Consequently, additional investigation is not recommended. No SI activities are proposed regarding the Facility's dumpsters.

Chemical Storage Cabinets or Closets

A number of flammable or reactive liquid storage cabinets are being used inside the Facility to store potentially flammable, combustible or reactive materials. The cabinets are of the type commercially available to meet OSHA/NFPA standards. The cabinets are positioned on the building's concrete slab floor a display no potential for a release to the outside environment. There are no records or indication of a release to the environment associated with the chemical storage cabinets. Consequently, additional investigation is not recommended. No SI activities are proposed regarding the Facility's chemical storage cabinets.

5C. Drainage Systems and Areas:

The following drainage control systems (as defined in N.J.A.C. 7:26E-3.1(c)1.v.) have never been utilized at this Facility:

- Process Area Sinks or Piping Which Receive Process Waste;
- Drainage Swales and Culverts.
- Storm Water Detention Ponds or Fire Water Ponds; or
- Surface Water Bodies;
- Septic Systems, Leach Fields, or Seepage Pits;
- Dry Wells.

Available records indicate that the following potential AOCs have been, or are present on the property:

- Floor Drains, Trenches and Piping, and Sumps.
- Roof Leaders When Process Operations Vent to Roof; and
- A Storm Sewer Collection System;

Each of these potential AOCs is discussed in detail below.

Storm Sewer Collection System

A storm water collection system, which includes seven catch basins, is used to route parking lot and roof runoff to the municipal storm sewer system. One catch basin is located in the parking lot outside of the shipping area. The remainder of the catch basins surround the northeastern and

ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY

southern portions of the finished goods storage area. A Storm Water Discharge Permit is not required for this Facility based on SIC code. There are no records or indication of a release to the storm drain system. Consequently, additional investigation is not recommended. No SI activities are proposed regarding the Facility's storm drain system.

Roof Leaders When Process Operations Vent to Roof

Current, process operations included a total of ten stacks, all of which were permitted while they were in operation. Given the non-toxic nature of the materials handled at the site which may vent through these stacks, the process filtration systems and the lack of discernable evidence of a discharge to the roof, it is believed that in this situation roof leaders do not represent a potential AOC. No SI activities are proposed regarding the Facility's roof leaders.

Floor Drains, Trenches and Piping, and Sumps

In early 1998 elevated levels of zinc were detected in the sanitary sewer discharge. This is detailed in the response to PA question 11B. There is no other record of hazardous material discharges to any of the floor drains. Further, there is no indication that the drains were used to dispose of materials other than floor wash/rinse water (i.e., no staining, corrosion, odors or modification to surface grates were apparent). All of the floor drains are reportedly plumbed to a common discharge pipe, which is routed to the sanitary sewer system. No investigation of the floor drains is recommended. No SI activities are proposed regarding the Facility's floor drains.

SD. Discharge and Disposal Areas:

None of the following discharge and disposal areas (as defined in N.J.A.C. 7:26E-3.1 (c)1.v.) have ever been present at this location:

- Wastewater Collection Systems, Including Septic Systems, Seepage Pits, and Dry Wells;
- Landfills or Landfarms;
- Sprayfields;
- Incinerators;
- Open Pipe Discharges; or
- Historic Fill or Any Other Fill Material.

SE. Other Areas of Concern:

The following Areas of Concern have never been present at this Facility:

- Areas of Stressed Vegetation;
- Underground Piping, or Industrial Process Sewers;
- Non-Contact Cooling Water Discharges; and
- Active or Inactive Production Wells.

Available records indicate that the following potential AOCs have been, or are present on the property:

- Electrical Transformers and Capacitors;
- Discolored or Spill Areas; and
- Compressor Vent Discharges.

Each of these potential AOCs is discussed in detail below.

ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY

Electrical Transformers and Capacitors

Three "wet-type" electrical transformer are present at the Facility. The transformers are located outdoors and on the south side of the building, on a concrete pad and within a chain link fence enclosure. The transformers are not marked or labeled, but are owned by the Public Service Electric and Gas Company (PSE&G). PSE&G was contacted to determine if the transformers contained PCBs. While PSE&G has not yet reported back, the transformers are mineral oil filled, and presumed under the regulations to be PCB-Contaminated, that is, containing 50 parts per million (ppm) or greater PCB, but less than 500 ppm, unless labeled NON-PCB. While there is no evidence or reported history of dielectric fluid leakage, further investigation of these transformers may be warranted following N.J.A.C. 7:26E 3.9(b). Unfortunately, the area inside of the enclosure cannot be accessed while the transformers are still active. Sample collection would necessitate shutting down the entire Facility. A sample will be collected from outside and along each side of the enclosure, and analyzed for TPHC and PCBs. A number of very small wall-mounted capacitors were identified in the lighting control room. These capacitors are in use. Given their current state and location within the lighting control room, they do not represent a potential environmental hazard.

Discolored or Spill Areas

Discolored or spill areas are limited to the asphalt surface of the parking lot and are the typical result of automotive activity. Minor discoloration was also apparent on the floor of the Machine Shop but is believed to represent no significant potential for environmental impact. No SI activities are proposed regarding these discolored areas or known spill areas.

Compressor Vent Discharges

There are no direct compressor vent discharges to the environment. The only compressors used on-site are located on the eastern side of the building on a concrete slab floor. The site visit indicated that vent discharges from the current compressor are through a special recycling/filtration accessory which removes all oil from the discharge. The older compressor discharges are directly to an open topped drum. The contents of the drum are regularly disposed of to eliminate any possibilities of a discharge. There was no indication of a discharge to the concrete floor or to the outside environment. No SI activities are proposed regarding the Facility's compressor vent discharges.

SE Building Interior Areas:

Loading or Transfer Areas

Loading or transfer areas located within the building were limited to loading non-hazardous finished products from the warehouse area onto delivery trucks. Consequently, no investigative activities are proposed for these areas.

Waste Treatment Areas

There were no waste treatment areas at this Facility.

Boiler Rooms

Heat for the building is currently supplied by gas-fired heaters, which are suspended from the ceiling of the building. These heaters were installed 4-5 years ago, replacing the old natural gas-fired boiler. Hot water is currently supplied by a number of gas-fired water heaters located throughout the building. There is no evidence of a hazardous substance discharge associated with these heating appliances. Consequently, no investigative activities are proposed for these features.

**ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY**

At some time prior to Stonco's purchase of the Facility the gas-fired boiler had apparently been converted from a fuel oil-fired system. Documentation exists that suggests that the two fuel oil USTs which supplied the boiler room were abandoned in 1985. SI activities will be completed to identify the presence of the tank, as detailed under section 5A. Bulk Storage Tanks and Appurtenances. No other SI activities concerning the boiler room are proposed.

Air Vents and Ducts

Air vents and ducts are limited to the building's heating and cooling system and ten permitted process-related stacks. The stacks are operated under permit from the NJDEP Division of Environmental Quality. There are reportedly no toxic emissions from the stacks, the primary purpose of the permits are to monitor particulates. There is also no evidence of a hazardous substance discharge from this system. Consequently, no investigative activities are proposed for this area or potentially associated areas (e.g. roof drains).

Hazardous Material Storage or Handling Areas

Hazardous material storage is primarily associated with two areas within the building. These areas are the hazardous waste storage area and the chemical storage area. There is no documentation or observations made during the site visit which suggest a release of hazardous materials from either of these areas.

In the past, the equipment that is currently used for the pre-paint batch wash system was used for a small chrome plating operation. As all of the vats associated with this process are suspended above grade, over a concrete floor. The floor appears to be in sound condition. The overflow from the vats is plumbed to a floor drain which is routed to the municipal sanitary sewer system (permitted discharge). There is no evidence of a discharge to the environment. Consequently, no investigative activities are proposed for this area.

CONTINUATION OF RESPONSE TO QUESTION 6 OF THE PAR

Aerial photographs from 1932, 1960, 1970, and 1980 were examined for evidence of land disturbance (excavation, grading, etc.); construction activities; features indicating the potential surficial contamination such as soil staining, transformer or drum storage or handling, surface impoundments, aboveground tanks, or stressed vegetation and evidence of past operations. The property was developed between 1932 and 1960 (Sandborn Maps indicate 1953). Since its development, the use of the property appears to have been basically consistent, the sole exception being the removal of a garage from the northern corner of the property, as part of the expansion of the Facility's warehousing operations. The following conditions were commonly observed on the 1960, 1970 and 1980 photographs (for the period following the development of the property):

- The parking areas in the northwestern and southwestern portions of the property appear to have always been used for employee or visitor vehicle parking;
- Tractor trailer and box truck traffic primarily occurs commensurate with the loading bays located on the northwestern side of the building; and
- No evidence of disposal activities or surface staining was identified.

1) 1932 - exact date unknown, approximate scale 1:12000, source: NJDEP Office of Tidelands Management.

This photograph shows the property while it and the neighboring parcels were still used as farmland or forested. While the trees and plowed fields are evident in the original photograph and despite multiple attempts, the clarity of the original could not be reproduced. The property is demarcated by the Rahway Valley Railroad to the south

**ATTACHMENT 1
DETAILED RESPONSES AND NARRATIVES FOR
PAR CHECKLIST LINE ITEMS
STONCO FACILITY
UNION, NEW JERSEY**

and Vauxhall Road (before it was straightened) to the southwest.

2) 1960 - exact date unknown, approximate scale 1:4800, source: Tri-State Transportation Commission.

This photograph shows the property, office building, manufacturing plant, front lawn, outbuildings and parking areas, while being operated prior to Stonco's occupation. Some truck trailer loading/unloading activities are apparent in the northeastern corner of the building (which is currently covered by the warehouse expansion). The rail siding located along the southeast side of the building is not being used. A small building (believed based on former employee accounts to be a six-car garage) is apparent in the northern corner of the property. Also visible near the southwestern edge of the property is the fire water pump house. No outside storage is apparent.

3) 1970 - exact date unknown, approximate scale 1:4800, source: Tri-State Transportation Commission.

This photograph shows the property while being operated by the Hazel Bishop Co., prior to Stonco's occupation. The features shown in this photograph are very similar to those shown in the 1960 photograph, the exception being the addition of a structure on northeast corner of the roof. This structure is believed, based on former employee statements, to have been built to accommodate a large vat that was used to mix toothpaste. The rail siding is not being used. No outside storage is apparent.

4) 1980 - exact date unknown, approximate scale 1:4800, source: Tri-State Transportation Commission.

This photograph shows the property during Stonco's occupation. The features shown in this photograph are very similar to those shown in the 1970 photograph, with the exceptions that the car garage has been replaced by additional warehouse space and the railroad is clearly abandoned.

Attachment B



NJ HomeTownLocator®
... local information, resources & data

Union, NJ 07083

Gazetteer | Cities | Counties | Maps | ZIP Codes | Features | Land | Census

US Gazetteer > New Jersey Gazetteer > New Jersey ZIP Codes > Union, NJ 07083

City/Town Names

Preferred Name, USPS

Union, NJ 07083

Not Acceptable, USPS

Chestnut, NJ 07083

Townley, NJ 07083

Union Center, NJ 07083

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Union, NJ



3:51 PM EDT MON S
Partly Cloudy
75°F
N13.8MPH G TO20.7

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[MLS Listings in another ZIP Code](#)
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Quick Job Search

Enter Keyword(s):

Enter a City:

Union

Select a State:

New Jersey

Select a Category:

All Job Categories

Search

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The **07083 ZIP Code** is centered^A in **Union County** at latitude 40.692 and longitude - 74.27 ([Panoramio Photos](#)). It is a **standard type ZIP Code**. Union County is in the **Eastern Time Zone** (UTC -5 hours) and observes daylight savings time.

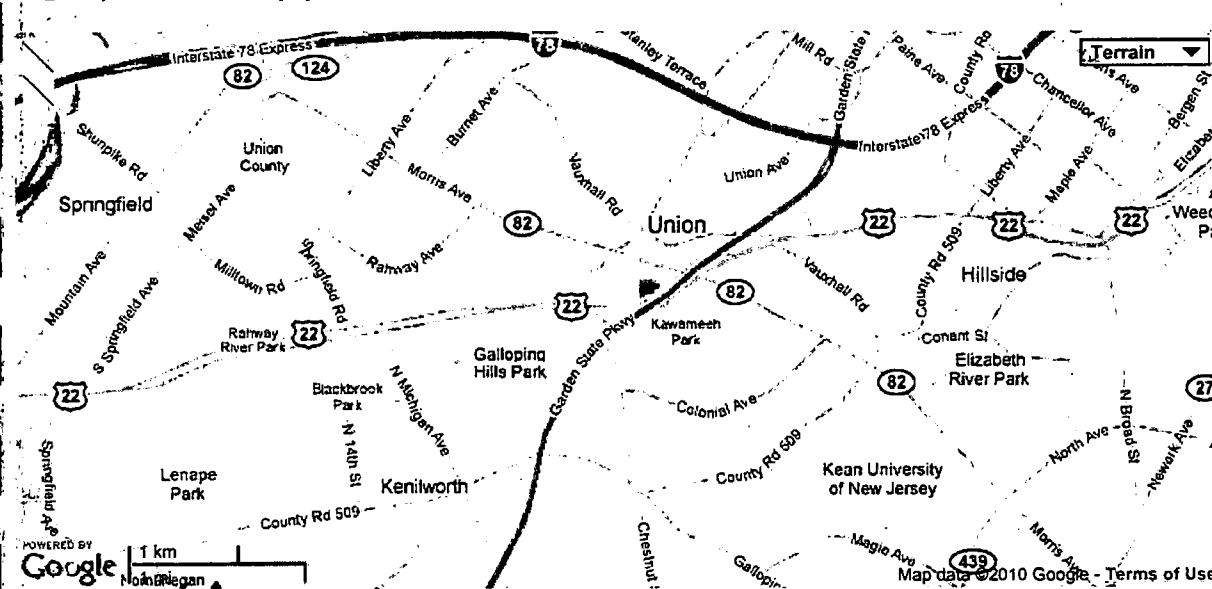
The population in ZIP Code Tabulation Area (ZCTA) 07083 was 50,766 with 18,536 housing units; a land area land area of 8.77 sq. miles; a water area of 0 sq. miles; and a **population density of 5,786.60 people per sq. mile** for Census 2000.
[Demographic Profile](#)

[Union County College](#) Request Union County College info and begin training today. [EducationStart.org](#)

[Damiano M. Fracasso, Esq.](#) Speak / email directly with me 24/7 All calls & emails confidential [www.fracassolaw.com](#)

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Union, NJ 07083 Map (Marker is ZIP Code Centroid NOT Town Center!)



[Local Search, 07083 ZIP Code](#) | [Distance & Driving Directions](#)

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Nearby Cities, Towns & Census Designated Places

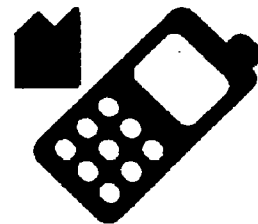
[Union, NJ](#) (< 0.1 mile)

[Cranford Junction, NJ](#) (2.4 miles SSW)



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Kenilworth, NJ (1.4 miles SW) **Hillside, NJ** (2.4 miles ENE)
Staten Island Junction, NJ (2.4 miles SSW)
Roselle, NJ (1.9 miles S)
Roselle Park, NJ (1.9 miles S) **Newark Heights, NJ** (2.4 miles NNE)
Maplewood, NJ (2.7 miles N)
Aldene, NJ (1.9 miles S)

Nearby Neighborhoods, Subdivisions & Other Small Populated Places

Unionburg, NJ (1.4 miles NNW) **Christopher Columbus Homes, NJ** (6.4 miles NE)
Mravlag Manor, NJ (4.3 miles SE)
Pioneer Homes, NJ (5.3 miles ESE) **Goodmans Crossing, NJ** (6.4 miles SW)
Old Place, NY (6.1 miles SE) **Glendinning Homes, NJ** (6.6 miles S)
Elm Park Village, NJ (6.3 miles NNE) **Knollwood, NJ** (8.5 miles NW)
Edwin Markham Gardens, NY (8.8 miles ESE)

ZIP Codes - Key Concepts

1. ZIP Codes are categories for grouping mailing addresses and **are not exact geographic regions**.
2. The centroid of a ZIP Code may be in one County and the associated city/town in another.
3. In rural areas, a single ZIP Code may be used for cities and towns in several different Counties.
4. ZIP Code "areas" can overlap, be subsets of each other, or be artificial constructs with no geographic area.
5. **ZIP Codes are only loosely tied to cities.**

¹ Keeping the above key concepts in mind, what we informally refer to as the "center" of a ZIP Code is most often actually the centroid of a polygon.

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Attachment C

NJD053513644

E98203

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
INDUSTRIAL SITE EVALUATION ELEMENT
CN 028, TRENTON, NJ 08625-0028

\$100.00 Revd.

INDUSTRIAL SITE RECOVERY ACT (ISRA)

GENERAL INFORMATION NOTICE (GIN)

This information must be submitted within 5 days following any applicable situation as specified at N.J.A.C. 7:26B-1.5 or any triggering event as specified at N.J.A.C. 7:26B-1.6. Please refer to the instruction and N.J.A.C. 7:26B-3.2 before filling out this form. Answer all questions. Should you encounter any problems in completing this form, we recommend that you discuss the matter with a representative from the Element. Submitting incorrect or insufficient data may cause processing delays and possible postponement of your transaction. Please call (609) 633-7141 between the hours of 8:30 a.m. and 4:30 p.m. to request assistance.

PLEASE PRINT OR TYPE

I. A. Industrial Establishment

Date May 1, 1998

Name Stonco Telephone # (908)264-7000

Street Address 2345 Vauxhall Road, P. O. Box 129

City or Town Union State NJ Zip Code 07083

Municipality Union Township County Union

B. Tax Block Number(s) 5609 Tax Lot Number(s) 32, 34, & C

C. Standard Industrial Classification (SIC) Number 3646

D. Current Property Owner(s)

Name The Genlyte Group, Inc. Telephone # (908) 810-4520

Firm The Genlyte Group Incorporated

Street Address 2345 Vauxhall Road, P. O. Box 3148

Municipality Union State NJ Zip Code 07083-1948

B. Current Business Owner (if different from I.A above)

Name n/a Telephone # ()

Firm

Street Address

Municipality State Zip Code

F. Have there been any previous ECRA/ISRA submissions (including Applicability Determinations) by this Industrial Establishment or another Industrial Establishment which occupied the same tax block and lot number?

____ Yes X No

If Yes, Name of Industrial Establishment n/a

ISRA Case No. n/a

Date Submitted n/a

Current Status n/a

G. Has this Industrial Establishment received a No Further Action Letter or Negative Declaration Approval?

____ Yes (please provide copy) X No

If Yes, was the No Further Action Letter or Negative Declaration Approval for the entire establishment?

____ Yes (please provide copy) ____ No n/a

2. Indicate the transaction(s) which initiates the ISRA review. Please check all that apply (See N.J.A.C. 7:26B-1.5 & 1.6):

____ Sale of Property

____ Sale of Business

____ Bankruptcy

____ Cessation

____ Stock Transfer/
Corporate Merger

____ Foreclosure

____ Sale of Assets

____ Partnership Situation Change

X Other (Attach documentation to explain) Joint Venture Creation
(see press release)

3. If a cessation of operations is involved at this location, was a Public Release made? ____ Yes ____ No n/a

If Yes, give the date of public release of the decision to close the facility. Date ____/____/____ n/a

4. If the transaction initiating an ISRA review is an agreement of sale or execution of an option to purchase, fill in the date of execution of that instrument plus provide one (1) copy of the document if also applying for a Remediation Agreement.

Date 4/28/98

A. Is a sale involved? X Yes ____ No (If No, skip 4B, C and D.)

B. Date of Agreement 04 / 28 / 98

C. Please complete the following:

Name of Party/Purchaser GT Lighting, LLC

Address 4360 Brownsboro Road - Suite 300

P. O. Box 35120, Louisville, KY 40232

Phone none at this time

5. A. Date proposed for closure of operations n/a

B. Date proposed for transfer of title August 1, 1998

6. Authorized agent designated to work with the Department

Name Richard J. Bindeiglass

Telephone # (908) 810-4520

Firm The Genlyte Group Incorporated

Street Address 2345 Vauxhall Road, P. O. Box 3148

Municipality Union

State NJ

Zip Code 07083-1948

7. Is this Industrial Establishment a Small Business? Yes X No

Note: Small Business means any business which is:

- resident in this state
- independently owned and operated
- not dominant in its field
- employs fewer than 100 full time employees

CERTIFICATIONS:

- A. The following certification shall be signed by the highest ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13.

Typed/Printed Name Robert Jackson Title Director of Operations
Signature [Signature] Date 5/1/98

Sworn to and Subscribed Before Me
on this 1st
Date of May 1998
Ida M. Jones
Notary

IDA JONES
NOTARY PUBLIC OF NEW JERSEY
Commission Expires 5/19/2002

- B. The following certification shall be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.
4. For purposes other than 1-3 above, by the person with the legal responsibility for the site.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13.

Typed/Printed Name Donna R. Ratliff Title VP Administration
Signature [Signature] Date 5/1/98

Sworn to and Subscribed Before Me
on this 1st
Date of May 1998
Ida M. Jones
Notary

IDA JONES
NOTARY PUBLIC OF NEW JERSEY
Commission Expires 5/19/2002

Attachment D

HWR1531
03/15/11

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

PAGE

WASTE MANIFESTS FROM 01/01/80 TO 12/31/94
FROM GENERATOR NJD053513644 TO SPECIFIED TSDF'S

GENERATOR	TSDF	MANIFEST	DATE SHIPPED	WASTE CODE	WASTE NAME	QUANTITY
STONCO LIGHTING 2345 VAUXHALL ROAD UNION , NJ NJD053513644	CHEMICAL SOLVENTS DISTLRS CO 42014 19TH AVE NEW YORK , NY NYD042775338	NJ00129622	01/20/84	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	110 G
		NJ00129631	05/23/84	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	185 G
		NJ00224753	06/01/84	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	330 G
		NJ00224755	06/05/84	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	275 G
		NJ00224796	09/11/84	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	165 G
		NY01329201	06/17/82	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	150 G
		NY01668006	06/06/83	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	330 G
	CHEMICAL WASTE DISPOSAL CORP 42-14 19TH AVE ASTORIA , NY NYD077444263	NYA1299366	03/25/85	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	110 G
		NYA1313442	07/03/85	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	110 G
		NY01329309	07/08/82	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	150 G
	CYCLE CHEM INC 217 S FIRST ST ELIZABETH , NJ NJD002200046	NJA0129448	10/18/85	F002	SPT HAL SOLV&STLBTM OF DEGREAS	400 G
		NJA0230041	10/14/86	D002	CHARACTERISTIC OF CORROSIVITY	600 G
				D002	CHARACTERISTIC OF CORROSIVITY	220 G
				D002	CHARACTERISTIC OF CORROSIVITY	200 P
				X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	55 G
		NJA0299356	09/30/87	X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	4000 P
	DETREX CORPORATION 835 INDUSTRIAL HWY CINNAMINSON , NJ NJD047318043	NJ00101342	01/10/83	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	297 G
		NJ00101348	10/27/82	F001	SPT HAL SOLV&SLUDG DEGREAS OPE	324 G
		NJ00101386	02/16/83	F002	SPT HAL SOLV&STLBTM OF DEGREAS	108 G
				F001	SPT HAL SOLV&SLUDG DEGREAS OPE	324 G

HWR1531
03/15/11

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

PAGE

WASTE MANIFESTS FROM 01/01/80 TO 12/31/94
FROM GENERATOR NJD053513644 TO SPECIFIED TSDF'S

GENERATOR	TSDF	MANIFEST	DATE SHIPPED	WASTE CODE	WASTE NAME	QUANTITY
STONCO LIGHTING 2345 VAUXHALL ROAD UNION , NJ	VEOLIA ES TECH SOLUTIONS 1 EDEN LN FLANDERS , NJ					
NJD053513644	VEOLIA ES TECH SOLUTIONS 1 EDEN LN FLANDERS , NJ NJD980536593	NJA0481144	06/28/89	X910	CHEMICAL PROCESS-SOLID,NOS	3200 P
		NJA0756108	09/25/89	D002	CHARACTERISTIC OF CORROSIVITY	30 P
				D002	CHARACTERISTIC OF CORROSIVITY	120 P
				X910	CHEMICAL PROCESS-SOLID,NOS	3000 P
				X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	400 P
		NJA0828245	03/16/90	X910	CHEMICAL PROCESS-SOLID,NOS	3200 P
				X900	CHEMICAL PROCESS-LIQUID,NOS	1200 P
		NJA0839240	06/08/90	X910	CHEMICAL PROCESS-SOLID,NOS	1200 P
		NJA1040285	05/14/91	X910	CHEMICAL PROCESS-SOLID,NOS	800 P
				X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	400 P
				D008	LEAD	400 P
		NJA1043820	03/07/91	X910	CHEMICAL PROCESS-SOLID,NOS	1200 P
				X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	400 P
		NJA1164814	11/14/91	X910	CHEMICAL PROCESS-SOLID,NOS	800 P
				X900	CHEMICAL PROCESS-LIQUID,NOS	400 P
		NJA1255513	04/30/92	X910	CHEMICAL PROCESS-SOLID,NOS	800 P
		NJA1395577	01/07/93	X910	CHEMICAL PROCESS-SOLID,NOS	800 P
		NJA1691699	06/16/93	X900	CHEMICAL PROCESS-LIQUID,NOS	400 P
				X910	CHEMICAL PROCESS-SOLID,NOS	800 P
		NJA1764633	09/16/93	X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	1600 P
				X910	CHEMICAL PROCESS-SOLID,NOS	400 P
		NJA1765546	12/10/93	X900	CHEMICAL PROCESS-LIQUID,NOS	500 P
				X910	CHEMICAL PROCESS-SOLID,NOS	1000 P
		NJA1885745	05/27/94	X910	CHEMICAL PROCESS-SOLID,NOS	800 P
		NJA1995983	11/11/94	X726	OIL/MT/ WRK,TURBN,DESEL,QUENCH	800 P
				X910	CHEMICAL PROCESS-SOLID,NOS	1200 P

30

HWR1531
03/15/11

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

PAGE

WASTE MANIFESTS FROM 01/01/80 TO 12/31/94
FROM GENERATOR NJD053513644 TO SPECIFIED TSDF'S

GENERATOR	TSDF	MANIFEST	DATE SHIPPED	WASTE CODE	WASTE NAME	QUANTITY
STONCO LIGHTING 2345 VAUXHALL ROAD UNION , NJ NJD053513644	VEQUAES TECHNICAL SOLUTIONS 1 EDEN LANE FLANDERS , NJ NJD080631369	NJA0388298	05/05/88	F003 D002 X799	NON HAL SOLV & STLBTM CHARACTERISTIC OF CORROSIVITY CONTAINERS, CRUSHED EMPTY (RINSE)	800 P 3600 P 800 P
		NJA0404499	02/04/88	D001 D002 X726	CHARACTERISTIC OF IGNITABILITY CHARACTERISTIC OF CORROSIVITY OIL/MT/ WRK, TURBN, DESEL, QUENCH	800 P 5500 P 2400 P
		NJA0480242	12/22/88	X910	CHEMICAL PROCESS-SOLID, NOS	4500 P
		NJA0480644	03/29/89	X910	CHEMICAL PROCESS-SOLID, NOS	3500 P
		NJA0482790	07/14/88	F003	NON HAL SOLV & STLBTM	800 P

35 WORK FILE RECORDS READ
55 LINE ITEMS RECORDS READ

31

WASTE MANIFESTS FROM 01/01/95 TO 12/31/06
FROM GENERATOR NJD053513644 TO SPECIFIED TSDF'S

GENERATOR	TSD#	MANIFEST	DATE SHIPPED	WASTE CODE	WASTE NAME	QUANTITY
STONCO LIGHTING 2345 VAUXHALL ROAD UNION, NJ NJD053513644	CYCLE CHEM INC 217 S FIRST ST ELIZABETH, NJ NJD002200046	NJA4117247	04/23/04	D008 LEAD		2500 P
		NJA5265842	10/25/05	D007 CHROMIUM		150 P
				F002 SPT HAL SOLV&STLBTM OF DEGREAS		330 G
	VEOLIA ES TECH SOLUTIONS 1 EDEN LN FLANDERS, NJ NJD980536593	NJA1995537	04/17/95	X726 OIL/MT/ WRK, TURBN, DESEL, QUENCH		800 P
				X910 CHEMICAL PROCESS-SOLID, NOS		400 P
		NJA2138869	10/20/95	X726 OIL/MT/ WRK, TURBN, DESEL, QUENCH		400 P
		NJA2704758	04/07/97	D002 CHARACTERISTIC OF CORROSIVITY		400 P
				D002 CHARACTERISTIC OF CORROSIVITY		400 P
				D002 CHARACTERISTIC OF CORROSIVITY		120 P
				X910 CHEMICAL PROCESS-SOLID, NOS		400 P
		NJA4096198	07/18/02	D001 CHARACTERISTIC OF IGNITABILITY		800 P

6 WORK FILE RECORDS READ
11 LINE ITEMS RECORDS READ

Manifest #	Ship Date	Generator ID Name	TSDF ID Name	Waste Codes	Qty	Units
001871633FLE	08/27/2008	NJD053513644, STONCO LIGHTING CO	NJD002200046, CYCLE CHEM INC	D001	110	gallons
001871633FLE	08/27/2008	NJD053513644, STONCO LIGHTING CO	NJD002200046, CYCLE CHEM INC	D002	165	gallons
001871633FLE	08/27/2008	NJD053513644, STONCO LIGHTING CO	NJD002200046, CYCLE CHEM INC	D002	90	gallons

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New Jersey DEP Hazardous Waste Manifest Search (1980 - 2009)

Search for a

Company Name

that begins with

the following letters/numbers:

stonco

for the Year: 1982

and show the first 100
manifests that match

then click here to: Find Manifests

Your search for : Company Names
beginning with "stonco" for the year
"1982" generated 1 company
match.

STONCO LIGHTING CO - NJD053513644

- [NJ00101348](#)
- [NY01329201](#)
- [NY01329309](#)


Manifest Detail for: NY01329201

**Company
Name:**STONCO LIGHTING
CO**Year :** 1982**Generator Epa
ID:**[NJD053513644](#)**Transporter ID:**[NYD000707919](#)**TSDF ID:**[NYD042775338](#)**Ship Date:**

06/17/1982

Line Number	Waste Code	Quantity	Units	Handling Code
----------------	---------------	----------	-------	------------------

1	F001	00150	G	T63
---	------	-------	---	-----

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department of environmental protection

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New Jersey DEP Hazardous Waste Manifest Search (1980 - 2009)

Search for a that the following letters/numbers:

for the Year: and show the first manifests that match then click here to:

Your search for : Company Names beginning with "stonco" for the year "1982" generated 1 company match.

STONCO LIGHTING CO - NJD053513644

- [NJ00101348](#)
- [NY01329201](#)
- [NY01329309](#)

Manifest Detail for: NY01329309

Company Name:

STONCO LIGHTING
CO

Year : 1982

Generator Epa ID:

[NJD053513644](#)

Transporter ID:

[NYD000707919](#)

TSDF ID:

[NYD077444263](#)

Ship Date:

07/08/1982

Line Number	Waste Code	Quantity	Units	Handling Code
1	F001	00150	G	T63

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New Jersey DEP Hazardous Waste Manifest Search (1980 - 2009)

Search for a

Company Name

that begins with

the following letters/numbers:

stonco

for the Year: 1982

and show the first 100
manifests that match

then click here to: Find Manifests

Your search for : Company Names
beginning with "stonco" for the year
"1982" generated 1 company
match.

STONCO LIGHTING CO - NJD053513644

- [NJ00101348](#)
- [NY01329201](#)
- [NY01329309](#)

Manifest Detail for: NJ00101348

Company
Name:STONCO LIGHTING
CO

Year : 1982

Generator Epa ID: [NJD053513644](#)Transporter ID: [NJD047318043](#)TSDF ID: [NJD047318043](#)

Ship Date: 10/27/1982

Line Number	Waste Code	Quantity	Units	Handling Code
1	F001	00324	G	S01

Date	Waste Code	Date	Volumes G – gallons P - pounds	
1982	F001	6/17	150 g	624 g
	F001	7/08	150 g	
	F001	10/27	324 g	
1983	F001	1/10	297 g	951 g
	F001	2/16	324 g	
	F002	2/16	108 g	
	F001	6/06	330 g	
1984	F001	1/20	110 g	1065 g
	F001	5/23	185 g	
	F001	6/01	330 g	
	F001	6/05	275 g	
	F001	9/11	165 g	
1985	F002	10/18	400 g	220 g
	F001	3/25	110 g	
	F001	7/03	110 g	
1986	D002	10/14	200 p	
	X726		55 g	
	D002		600 g	
	D002		220 g	
1987	X726	9/30	4000 p	
1988	X799	5/05	800 p	
	D002		3600 p	
	F003		800 p	
	D002	2/04	5500 p	
	X726		2400 p	
	D001		800 p	
	X910	12/22	4500 p	
	F003	7/14	800 p	

F001 listing is appropriate when PCE, TCE,, TCA and methylene chloride are used in large-scale industrial degreasing operations [e.g., cold cleaning, vapor degreasing (open top and conveyorized), and fabric scouring].

F002 listing is appropriate when PCE, TCE,, TCA and methylene chloride are used in equipment cleaning or in smaller scale degreasing operations involving repair work (that do not employ industrial degreasing processes as described above)

F003 listing is based solely on the waste exhibiting the characteristic of ignitability

Date	Waste Code	Date	Volumes G – gallons P – pounds	Total F001
1989	X910	3/29	3500 p	
	X910	6/28	3200 p	
	D002	9/25	30 p	
	D002		120 p	
	X910		3000 p	
	X726		400 p	
1990	X910	3/16	3200 p	
	X910	3/16	3200 p	
	X900		1200 p	
	X910	6/08	1200 p	
1991	X910	5/14	800 p	
	X726		400 p	
	D008		400 p	
	X910	3/07	1200 p	
	X726		400 p	
	X910	11/14	800 p	
	X900		400 p	
1992	X910	4/30	800 p	
1993	X910	1/07	800 p	
	X900	6/16	400 p	
	X910		800 p	
	X726	9/16	1600 p	
	X910		400 p	
	X910	12/10	1000 p	
	X900		500 p	
1994	X910	5/27	800 p	
	X910	11/11	1200 p	
	X726		800 p	
1995	X910	4/17	400 p	
	X726		800 p	
	X726	10/20	400 p	

X900 – liquid chemical waste
X799

X910 – solid chemical waste
X726 – waste oil

Date	Waste Code	Date	Volumes G – gallons P – pounds	Total F001
1996	None listed			
1997	D002 D002 D002 X910	4/07	400 p 1200 p 400 p 400 p	
1998	None listed			
1999	NL			
2000	NL			
2001	NL			
2002	D001	7/18	800 p	
2003	NL			
2004	D008	4/23	2500 g	
2005	D007 F002	10/25	150 p 330 g	
2006	NL			
2007	NL			
2008	D001 D002 D002	8/27	110 g 165 g 90 g	
2009	NL			

D001 - Petroleum Solvents

D002 - Spent Acids

D007 - Chromium

D008 - Lead



Attachment E

Genlyte Thomas Group - NJDEP Community Right to Know

Year	Compound	Daily Quantity (pounds)	Use
1992	MEK	18	Maintenance
	TCE	10	Machine shop
1993	MEK	18	Maintenance
	TCE	10	Machine shop
1994	MEK	18	Not listed
	TCE	10	Machine shop
1995	MEK	9	Maintenance
	TCE	10	Machine shop
1996	MEK	9	Maintenance
	1,1,1-trichloroethane	10	Machine shop
1997	MEK	9	Maintenance
	1,1,1-trichloroethane	10	Machine shop
1998	No report		
1999	MEK	9	Maintenance
2000	MEK	9	Maintenance
2001	Powder paint shop	Acetylene Aluminum fume dust	Paint Area
2002	"	"	"
2003	"	"	"
2004	"	"	"
2005	"	"	"
2006	"	"	"
2007	"	"	"
2008	"	"	"

Source: NJDEP Facits Data Base

MEK (Butanone) is an effective and common solvent and is used in processes involving gums, resins, cellulose acetate and nitrocellulose coatings and in vinyl films. For this reason it finds use in the manufacture of plastics, textiles, in the production of paraffin wax, and in household products such as lacquer, varnishes, paint remover, a denaturing agent for denatured alcohol, glues, and as a cleaning agent. It has similar solvent properties to acetone but has a significantly slower evaporation rate.

Perhaps the greatest use of **TCE** has been as a degreaser for metal parts. The demand for TCE as a degreaser began to decline in the 1950s in favor of the less toxic 1,1,1-trichloroethane. However, 1,1,1-trichloroethane production has been phased out in most of the world under the terms of the Montreal Protocol, and as a result trichloroethylene has experienced some resurgence in use as a degreaser.

1,1,1-Trichloroethane is an excellent solvent for many organic materials and also one of the least toxic of the chlorinated hydrocarbons. Prior to the Montreal Protocol, it was widely used for cleaning metal parts and circuit boards, as a photoresist solvent in the electronics industry, as an aerosol propellant, as a cutting fluid additive, and as a solvent for inks, paints, adhesives and other coatings. The Montreal Protocol targeted 1,1,1-trichloroethane as one of those compounds responsible for ozone depletion and banned its use beginning in 1996. Since then, its manufacture and use has been phased out throughout most of the world.



CRTK Surveys

Mailed	10/30/1997		<input type="checkbox"/> Reprint Label?	Source	ORIG	Elex Pswd	
Received	03/10/1998		<input type="checkbox"/> Incomplete?	Medium	Hard Copy	CRTK	
Reminder			User Status	Error/Warning Letter Sent		Batch No	History
			User - Above Threshold				

Substance Name	Sub No	CAS No	Dot No	Avg Daily	Max Daily	Days On Site	Location	Histor
ETHYLBENZENE	↓ 0851	100-41-4	1175	09	09	365	POWDER PAINT SHOP	
BUTANE	↓ 0273	106-97-8	1011	10	10	365	WET PAINT SHOP	
TOLUENE	↓ 1866	108-88-3	1294	10	10	365	WET PAINT SHOP	
TOLUENE	↓ 1866	108-88-3	1294	10	10	365	ASSEMBLY	
TOLUENE	↓ 1866	108-88-3	1294	10	10	365	ASSEMBLY	
N-HEXANE	↓ 1340	110-54-3	1208	09	11	365	ASSEMBLY	
DIETHANOLAMINE	↓ 0686	111-42-2		10	13	365	ASSEMBLY AND SHIPPING	
XYLENE (MIXED ISOMERS)	↓ 2014	1330-20-7	1307	09	11	365	WET PAINT SHOP	
ALUMINUM OXIDE (FIBROUS FORMS)	↓ 2891	1344-28-1		12	12	365	SHIPPING & ASSEMBLY	
1,1,1-TRICHLOROETHANE	↓ 1237	71-55-6	2831	10	10	365	MACHINE SHOP	

Container		Hazards						Pressure	Temp	Purity	Phys State	Trade Secret	EPCRA
Code	Description (if Code is Other)	Fire	Press	React	Acute	Chronic	None	Code	Code				Only
CN		✓	✓	✓	✓	✓	✓	01	04	M	G	✓	✓

Added By	FACITS	Added On	05/06/1999	Changed By		Changed On	
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Attachment F

10/05/99

**ATTACHMENT 5
SITE INVESTIGATION REPORT
GENLYTE CORPORATION - STONCO FACILITY
UNION, NEW JERSEY**

INTRODUCTION

Purpose and Scope

This Site Investigation (SI) Report has been prepared by Blasland, Bouck & Lee, Inc. (BBL) for the Genlyte Corporation's (Genlyte's) Stonco Facility in Union, New Jersey in accordance with the New Jersey Department of Environmental Protection's (NJDEP's) Industrial Site Recovery Act (ISRA). The purpose of the SI was to identify specific areas of concern (AOCs) based on further investigation and possible sampling of potential AOCs identified in the preliminary assessment. The SI scope of work (SOW) involved biased soil sampling at the AOCs in accordance with the NJDEP's Technical Requirements for Site Remediation (TRSR) N.J.A.C. 7:26E in order to investigate potential releases to the environment.

Site Information

The Stonco Facility includes administrative, manufacturing, and warehousing operations related to the manufacture and distribution of lighting products and components, specializing in outdoor and industrial housings and components.

Information on site history, physical setting, and site features, and additional information on facility operations can be found in the preliminary assessment portion of this report. A layout of the site and locations of the AOCs are presented in Figure 1.

TECHNICAL OVERVIEW

The NJDEP's TRSR require SI sampling in all potentially contaminated AOCs, whether relating to current or former uses of the site, to determine if contaminants are presently above the applicable unrestricted use remediation standards [N.J.A.C. 7:26E-3.4(a)]. During the preliminary assessment of the site, one AOC was identified: an area where two underground storage tanks (USTs) were previously located. A SOW was developed based on the TRSR and the NJDEP 1992 Field Sampling Procedures Manual to investigate this potential AOC. The following section describes the investigation and sampling results associated with the AOC.

Field Sampling Procedures

USTs and Associated Piping

Two USTs containing No. 2 fuel oil were historically used at the facility, but were reportedly removed on December 15 - 16, 1985. Reportedly, the 500- and 10,000-gallon tanks had not leaked based on visual observations at the time of removal; however, documentation in the form of photographs, and/or monitoring and sampling data is unavailable. Therefore, SI activities included metal detector scans, and two test pit excavations in the UST area, and collection of soil samples to support prior reports. The former UST areas were located based on recollections of site personnel, the location of a former UST vent pipe, and topography and vegetation changes at the potential AOC.

The investigation included: 1) visual observations of the floor and sidewalls of the excavations for signs of soil contamination; 2) field screening the floor and sidewalls of the excavations with a photoionization detector (PID); and 3) collection of soil samples for laboratory analysis from the centerline of the excavations at a frequency equal to the total length of the tank divided by five.

Assuming a 10,000-gallon tank with a 96-inch diameter would yield a tank length of approximately 20 feet, a test pit excavation (Excavation A) approximately 25 feet in length was created and six soil samples were collected from the base of the excavation. The post-excavation soil samples were collected from the backhoe bucket using decontaminated, stainless steel scoops.

Assuming a 500-gallon tank with a 48-inch diameter would yield a tank length of approximately 5 feet, a test pit excavation (Excavation B) approximately 5 feet in length was created and two soil samples were collected from the base of the excavation.

Some small areas of dark soil were noted in random locations in Excavation A. When these soil areas were encountered in the backhoe bucket while sampling, collection of samples was biased to these dark areas. The darkest areas with elevated PID readings were isolated from surrounding soils and staged on plastic sheeting adjacent to the AOC.

All of the soil samples were analyzed for total petroleum hydrocarbon (TPH), and two of the samples with the highest TPH concentrations were analyzed for target compound list (TCL) volatile organic compounds (VOC) plus the first 10 compounds identifiable in a library search (+10).

Results

Excavation A

Six soil samples were collected from the excavation floor. Analytical results are presented in Table 1 and indicate that:

- TPH was detected in samples A-2, A-3, A-4, A-5, and A-6 at concentrations of 40.2 mg/kg; 410 mg/kg; 21,500 mg/kg; 111 mg/kg; and 181 mg/kg, respectively. All detected concentrations are less than the NJDEP soil cleanup criteria (10,000 mg/kg), except for A-4.
- Two samples, A-3 and A-4, were also analyzed for VOCs in accordance with the TRSR. VOCs were not detected, except for 0.17 mg/kg of tetrachloroethene. The detected concentration is less than the NJDEP soil cleanup criteria (1.0 mg/kg). Additionally, no VOCs were detected in the trip blank.

Excavation B

Two soil samples were collected from the excavation floor for TPH analysis. Analytical results are presented in Table 2 and indicate that:

- TPH was not detected in the soil samples collected from this excavation.

CONCLUSIONS/RECOMMENDATIONS

Soil samples collected from test pits at the former UST area indicated an absence of TPH concentrations above the NJDEP criterion of 10,000 mg/kg, with the exception of sample A-4, which contained 21,500 mg/kg TPH. VOC analysis of this sample showed no detectable concentrations. Samples collected on either side of sample

A-4 contained 410 mg/kg (A-3) and 111 mg/kg (A-5) TPH, thus indicating the localized nature of the TPH exceedance in sample A-4.

Field screening of soil with a PID also indicated minimal volatile compound vapors in the soil at this AOC. Native soil (or fill) gave readings of 0.0 ppm while some of the scattered dark areas gave readings up to 17 ppm. It should be noted that the dark soil observed in small areas at Excavation A may be residual material associated with the asphalt coating historically used as a protective outer coating on steel USTs, or possibly extraneous asphalt material that entered the excavation during the UST removal process. During SI test pit excavation operations, the small amounts of dark soil were isolated from surrounding soil as it was encountered and was placed on (and covered by) plastic sheeting prior to disposal. It is estimated that only one-half cubic yard of dark soil was found in, and removed from, the excavation. The staged soil was transported by Advanced Environmental Technology Services (AETS), and disposed of at a registered disposal facility operated by Onyx Environmental Services, LLC. (Facility Registration No. NJD980536593). The waste disposal Manifest is attached to this report.

No further action is recommended at this AOC based on the localized nature of the biased sample (A-4), the absence of VOCs in the sample, and the removal of darkened soil from the base of the excavation at this location.

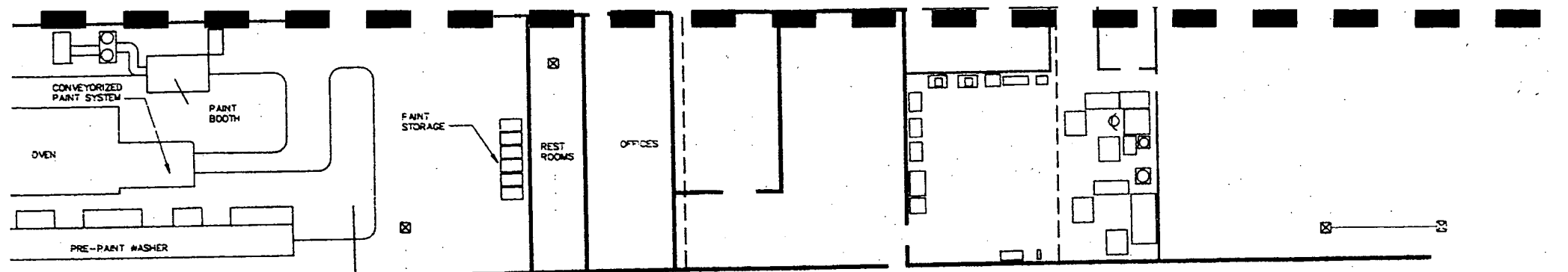
REFERENCES

New Jersey Administrative Code, N.J.A.C.

N.J.A.C. 7:26E Technical Requirements for Site Remediation.

New Jersey Department of Environmental Protection, NJDEP.

NJDEP. 1992. Field Sampling Procedures Manual.



B-1
PIT B
B-2

PIT A
A-1 A-2 A-3 A-4 A-5 A-6

TOTAL PETROLEUM HYDROCARBONS	A4 10.0-10.5 bgs	UNITS
	121	mg/Kg(DRY WT.)
TOTAL PETROLEUM HYDROCARBONS	A4 12.0-12.5 bgs	UNITS
VOLATILE ORGANIC COMPOUNDS (VOCs)	1720	mg/Kg(DRY WT.)
	ND	

LEGEND

A-1 @ SAMPLE

TEST 1

⊗ FLOOR

S SANITARY

bgs BELOW

ND NOT D

SAMPLE ID	DEPTH (bgs)	TEMP (°C)
B-1	135.51	
B-2	135.07	
A-1	135.14	
A-2	135.18	
A-3	135.25	
A-4	135.30	
A-5	135.29	
A-6	135.28	
A-7	135.78	
A-8	134.60	

RAHWAY VALLEY RAILROAD

GENLYTE
STONC
UNION,
PRELIMINARY AS

SOIL SAMPLING
DETECTED (

BBL BLA ent

1000 1
RESULTS OF TEST PIT A SAMPLING
GENLYTE CORPORATION, STONCO FACILITY
UNION, NJ

Sample ID				A-1 79308 08/20/98 SOIL	A-2 79309 08/20/98 SOIL	A-3 79310 08/20/98 SOIL	A-4 79311 08/20/98 SOIL	A-5 79312 08/20/98 SOIL	A-6 79313 08/20/98 SOIL
Lab Sample Number									
Sampling Date									
Matrix									
VOLATILE COMPOUNDS (ug/kg)	USCC	RSCC	IGWSCC						
Chloromethane	520,000	1,000,000	10,000	NR	NR	600 U	590 U	NR	NR
Bromomethane	79,000	1,000,000	1,000	NR	NR	600 U	590 U	NR	NR
Vinyl Chloride	2,000	7,000	10,000	NR	NR	600 U	590 U	NR	NR
Chloroethane	NA	NA	NA	NR	NR	600 U	590 U	NR	NR
Methylene Chloride	49,000	210,000	1,000	NR	NR	390 U	350 U	NR	NR
Acetone	1,000,000	1,000,000	100,000	NR	NR	600 U	590 U	NR	NR
Carbon Disulfide	NA	NA	NA	NR	NR	600 U	590 U	NR	NR
1,1-Dichloroethane	8,000	150,000	10,000	NR	NR	600 U	590 U	NR	NR
trans-1,2-Dichloroethane	570,000	1,000,000	10,000	NR	NR	600 U	590 U	NR	NR
cis-1,2-Dichloroethane	1,000,000	1,000,000	50,000	NR	NR	600 U	590 U	NR	NR
Chloroform	79,000	1,000,000	1,000	NR	NR	600 U	590 U	NR	NR
1,2-Dichloroethane	19,000	26,000	1,000	NR	NR	600 U	590 U	NR	NR
2-Butanone	8,000	24,000	1,000	NR	NR	240 U	240 U	NR	NR
1,1,1-Trichloroethane	1,000,000	1,000,000	50,000	NR	NR	600 U	590 U	NR	NR
Carbon Tetrachloride	210,000	1,000,000	50,000	NR	NR	600 U	590 U	NR	NR
Bromodichloromethane	2,000	4,000	1,000	NR	NR	240 U	240 U	NR	NR
1,2-Dichloropropane	11,000	46,000	1,000	NR	NR	120 U	120 U	NR	NR
cis-1,3-Dichloropropane*	10,000	43,000	NA	NR	NR	120 U	120 U	NR	NR
Trichloroethane	4,000	5,000	1,000	NR	NR	600 U	590 U	NR	NR
Dibromochloromethane	23,000	54,000	1,000	NR	NR	120 U	120 U	NR	NR
1,1,2-Trichloroethane	110,000	1,000,000	1,000	NR	NR	600 U	590 U	NR	NR
Benzene	22,000	420,000	1,000	NR	NR	360 U	350 U	NR	NR
trans-1,3-Dichloropropane*	3,000	13,000	1,000	NR	NR	120 U	120 U	NR	NR
Bromoform	4,000	5,000	1,000	NR	NR	600 U	590 U	NR	NR
4-Methyl-2-Pentanone	86,000	370,000	1,000	NR	NR	480 U	470 U	NR	NR
2-Hexanone	1,000,000	1,000,000	50,000	NR	NR	600 U	590 U	NR	NR
Tetrachloroethane	NA	NA	NA	NR	NR	600 U	590 U	NR	NR
1,1,2,2-Tetrachloroethane	4,000	6,000	1,000	NR	NR	170	120 U	NR	NR
Toluene	34,000	70,000	1,000	NR	NR	120 U	120 U	NR	NR
Chlorobenzene	1,000,000	1,000,000	500,000	NR	NR	600 U	590 U	NR	NR
Ethylbenzene	37,000	680,000	1,000	NR	NR	600 U	590 U	NR	NR
Styrene	1,000,000	1,000,000	100,000	NR	NR	480 U	470 U	NR	NR
Xylene (Total)	23,000	97,000	100,000	NR	NR	600 U	590 U	NR	NR
Total Estimated Conc. VOC TICs (g)	410,000	1,000,000	10,000	NR	NR	600 U	590 U	NR	NR
TOTAL PETROLEUM HYDROCARBONS (mg/kg)	10,000	10,000	10,000	25 U	40.2	78200	85300	111	181

USCC - NJDEP Unrestricted Use Soil Cleanup Criteria

RSCC - NJDEP Restricted Use Soil Cleanup Criteria

IGWSCC - NJDEP Impact to Ground Water Soil Cleanup Criteria

NA - Not applicable.

* - Values listed reflect the combined standards for the cis and trans isomers of 1,3-Dichloropropane.

NR - Not analyzed.

U - compound was not detected. Numeric value provided is the detection limit.

J - Estimated concentration below the detection limit

B - The analyte was found in the laboratory blank as well as the sample.

Table 2
RESULTS OF TEST PIT B SAMPLING
GENLYTE CORPORATION, STONCO FACILITY
UNION, NJ

Sample ID				B-1 79314 09/20/98 SOIL	B-2 79315 09/20/98 SOIL
Lab Sample Number					
Sampling Date					
Matrix					
VOLATILE COMPOUNDS (ug/kg)	USCC	RSCC	IGWSCC		
Chloromethane	520,000	1,000,000	10,000	NR	NR
Bromomethane	79,000	1,000,000	1,000	NR	NR
Vinyl Chloride	2,000	7,000	10,000	NR	NR
Chloroethane	NA	NA	NA	NR	NR
Methylene Chloride	49,000	210,000	1,000	NR	NR
Acetone	1,000,000	1,000,000	100,000	NR	NR
Carbon Disulfide	NA	NA	NA	NR	NR
1,1-Dichloroethane	8,000	150,000	10,000	NR	NR
trans-1,2-Dichloroethane	570,000	1,000,000	10,000	NR	NR
cis-1,2-Dichloroethane	1,000,000	1,000,000	50,000	NR	NR
Chloroform	79,000	1,000,000	1,000	NR	NR
1,2-Dichloroethane	19,000	28,000	1,000	NR	NR
2-Butanone	6,000	24,000	1,000	NR	NR
1,1,1-Trichloroethane	1,000,000	1,000,000	50,000	NR	NR
Carbon Tetrachloride	210,000	1,000,000	50,000	NR	NR
Bromodichloromethane	2,000	4,000	1,000	NR	NR
1,2-Dichloropropene	11,000	48,000	1,000	NR	NR
cis-1,3-Dichloropropene ^a	10,000	43,000	NA	NR	NR
Trichloroethene	4,000	5,000	1,000	NR	NR
Dibromochloromethane	23,000	54,000	1,000	NR	NR
1,1,2-Trichloroethane	110,000	1,000,000	1,000	NR	NR
Benzene	22,000	420,000	1,000	NR	NR
trans-1,3-Dichloropropene ^a	3,000	13,000	1,000	NR	NR
Bromoform	4,000	5,000	1,000	NR	NR
4-Methyl-2-Pentanone	88,000	370,000	1,000	NR	NR
2-Hexanone	1,000,000	1,000,000	50,000	NR	NR
Tetrachloroethene	NA	NA	NA	NR	NR
1,1,2,2-Tetrachloroethane	4,000	6,000	1,000	NR	NR
Toluene	34,000	70,000	1,000	NR	NR
Chlorobenzene	1,000,000	1,000,000	500,000	NR	NR
Ethylbenzene	37,000	680,000	1,000	NR	NR
Styrene	1,000,000	1,000,000	100,000	NR	NR
Xylenes (Total)	23,000	97,000	100,000	NR	NR
Total Estimated Conc. VOC TICs (p)	410,000	1,000,000	10,000	NR	NR
TOTAL PETROLEUM HYDROCARBONS (mg/kg)	10,000	10,000	10,000	25 U	25 U

USCC - NJDEP Unrestricted Use Soil Cleanup Criteria

RSCC - NJDEP Restricted Use Soil Cleanup Criteria

IGWSCC - NJDEP Impact to Ground Water Soil Cleanup Criteria

NA - Not applicable.

^a - Values listed reflect the combined standards for the cis and trans isomers of 1,3-Dichloropropene.

NR - Not analyzed.

U - compound was not detected. Numeric value provided is the detection limit.

J - Estimated concentration below the detection limit

B - The analyte was found in the laboratory blank as well as the sample.

Table 3
RESULTS OF TEST PIT SAMPLING-TRIP BLANK
GENLYTE CORPORATION, STONCO FACILITY
UNION, NJ

Sample ID				TS042088
Lab Sample Number				79317
Sampling Date				08/20/98
Matrix				METHANOL
VOLATILE COMPOUNDS (ug/kg)	USCC	RSCC	IGWSCC	
Chloromethane	520,000	1,000,000	10,000	620 U
Bromomethane	79,000	1,000,000	1,000	620 U
Vinyl Chloride	2,000	7,000	10,000	620 U
Chloroethane	NA	NA	NA	620 U
Methylene Chloride	49,000	210,000	1,000	380 U
Acetone	1,000,000	1,000,000	100,000	620 U
Carbon Disulfide	NA	NA	NA	620 U
1,1-Dichloroethene	8,000	150,000	10,000	250 U
1,1-Dichloroethane	570,000	1,000,000	10,000	620 U
trans-1,2-Dichloroethene	1,000,000	1,000,000	50,000	620 U
cis-1,2-Dichloroethene	79,000	1,000,000	1,000	620 U
Chloroform	19,000	28,000	1,000	620 U
1,2-Dichloroethane	6,000	24,000	1,000	250 U
2-Butanone	1,000,000	1,000,000	50,000	620 U
1,1,1-Trichloroethane	210,000	1,000,000	50,000	620 U
Carbon Tetrachloride	2,000	4,000	1,000	250 U
Bromodichloromethane	11,000	48,000	1,000	120 U
1,2-Dichloropropane	10,000	43,000	NA	120 U
cis-1,3-Dichloropropene ^A	4,000	5,000	1,000	620 U
Trichloroethene	23,000	54,000	1,000	120 U
Dibromochloromethane	110,000	1,000,000	1,000	620 U
1,1,2-Trichloroethane	22,000	420,000	1,000	380 U
Benzene	3,000	13,000	1,000	120 U
trans-1,3-Dichloropropene ^A	4,000	5,000	1,000	620 U
Bromoform	86,000	370,000	1,000	500 U
4-Methyl-2-Pentanone	1,000,000	1,000,000	50,000	620 U
2-Hexanone	NA	NA	NA	620 U
Tetrachloroethene	4,000	6,000	1,000	120 U
1,1,2,2-Tetrachloroethane	34,000	70,000	1,000	120 U
Toluene	1,000,000	1,000,000	500,000	620 U
Chlorobenzene	37,000	680,000	1,000	620 U
Ethylbenzene	1,000,000	1,000,000	100,000	500 U
Styrene	23,000	97,000	100,000	620 U
Xylenes (Total)	410,000	1,000,000	10,000	620 U
Total Estimated Conc. VOC TICs (g)				0

USCC - NJDEP Unrestricted Use Soil Cleanup Criteria

RSCC - NJDEP Restricted Use Soil Cleanup Criteria

IGWSCC - NJDEP Impact to Ground Water Soil Cleanup Criteria

NA - Not applicable.

^A - Values listed reflect the combined standards for the cis and trans isomers of 1,3-Dichloropropene

U - compound was not detected. Numeric value provided is the detection limit.

Attachment G



Christine Todd Whitman
Governor

State of New Jersey
Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

Bureau of Field Operations
ISRA Initial Notice
P.O. Box 435
401 East State Street
Trenton, NJ 08625-0435

JAN 18 2000

Mr. Richard J. Bindeglass
The Genlyte Group, Inc.
2345 Vauxhall Road
Union, NJ 07083

Re: Industrial Establishment: Stonco Lighting
Address: 2345 Vauxhall Road
Union Twp., Union County
ISRA Case #E1998203

Dear Mr. Bindeglass:

This is to advise you as the authorized agent for Stonco Lighting as of 1/18/00, the New Jersey Department of Environmental Protection ("Department") has received a complete Industrial Site Recovery Act (ISRA) Preliminary Assessment and Site Investigation Report. However, after reviewing both reports, there remains two areas of concern that need further investigation.

Your report states that elevated levels of zinc were reported in the sanitary sewer discharge. Confirmation must be made (via dye testing) that all floor drains discharge to the sanitary sewer. Your report also states that TPH was found at 21,500 ppm in sample A-4 and delineated horizontally which showed no other sample above DEP soil cleanup criteria. According to the Technical Regulations for Site Remediation, you must also sample vertically to insure that all of the contaminated soil was previously removed.

Be advised, ISRA imposes as a precondition of a sale of business, assets or property that the owner or operator must first obtain a No-Further-Action approval or approval of a Remedial Action Workplan or Remediation Agreement.

Failure to disclose and address all areas of environmental concern in accordance with N.J.A.C. 7:28E can result in unnecessary case delays. Please refer to N.J.A.C. 7:28E-1.8 to ensure all areas have been identified and are scheduled for investigation in accordance with N.J.A.C. 7:28E-3.3-3.12.

Should you have any questions, please contact me at (609) 633-0708.

Sincerely,

Charles Satter, Case Manager
Bureau of Field Operations

6

Attachment H



Transmitted Via Regular Mail

September 1, 2000

Mr. Charles Salter
Case Manager, Bureau of Field Operations
ISRA Initial Notice
NJ Department of Environmental Protection
P.O. Box 435
401 East State Street
Trenton, NJ 08625-0435

Re: PA/SI Report Update
BBL Project #: 08561
Industrial Establishment: Stonco Lighting
ISRA Case # E1998203

Dear Mr. Salter:

This correspondence is in response to the New Jersey Department of Environmental Protection's (NJDEP's) February 25, 2000 Comment Letter regarding the ISRA Preliminary Assessment/Site Investigation (PA/SI) Report for the above facility. According to the letter, two items required further verification: facility floor drain discharge points to the sanitary sewer, and soil conditions at a deeper interval at boring location A-4 to identify concentrations of total petroleum hydrocarbons (TPHs) in the subsurface.

The attached Site Map indicates that the floor drains at the facility discharge to a sanitary sewer line located along the southern side of the manufacturing building. The floor drain discharge information provided on this map (and corroborated by a professional engineer from Killam Associates) is consistent with information previously provided to NJDEP in the PA/SI Report, and serves to document the floor drain discharge locations to the sanitary sewer. Based on this information, no further action is proposed for the floor drains at the facility.

On June 1, 2000, additional subsurface soil samples were collected from the A-4 boring location to identify the vertical extent of TPH concentrations. Sampling methods and analytical parameters were similar to those outlined in the December 1999 PA/SI Report, and sampling locations are identified on Figure 3 of the SI Report (see attachment). Soil samples were collected from the 10.0 to 10.5 feet and 12.0 to 12.5 feet below ground surface (bgs) depth intervals using a Geoprobe drill rig equipped with a split-spoon core sampler. Table 1 presents the results of TPH analyses which indicated concentrations of 121 mg/kg and 1,720 mg/kg in the 10.0 to 10.5 and 12.0 to 12.5 feet bgs samples, respectively. These concentrations are less than the NJDEP soil cleanup criteria of 10,000 mg/kg for TPH. In addition, the 12.0 to 12.5 feet depth interval sample was collected using the methanol preservation technique for

Mr. Charles Salter
September 1, 2000
Page 2 of 2

volatile organic compound (VOC) analysis. Results showed no detectable concentrations of target VOCs. Field screening of soil samples from the A-4 boring location was also performed using a photoionization detector (PID). Table 2 summarizes these field-screening results for VOCs, measured in 6-inch intervals, from 0.5 feet bgs to 12.5 feet bgs, with an additional sample taken at 13.0 ft. bgs. Results indicated non-detectable or low levels of vapors in the majority of samples with moderate detections at the depth intervals sampled.

It is apparent from these sampling results that the single detection of TPH at a concentration greater than the 10,000 mg/kg criterion in subsurface soil sample A-4 is confined to a discrete depth interval at this location, and represents an isolated occurrence in the former UST area. In addition, non-detectable VOC concentrations in soil samples collected from boring A-4 indicate an absence of target VOCs associated with TPH in subsurface soils.

Additional work at this AOC appears unwarranted because vertical delineation of TPH at boring location A-4 has been achieved by supplemental sampling, the single isolated sample out of 8 samples contained an elevated TPH concentration, and VOCs are non-detectable in the single isolated sample as well as a deeper interval sample from the same boring. Based on this information, no further action is proposed for this AOC.

At this time, it is our understanding that we have fulfilled our ISRA requirements and that, upon review and acceptance of this report, the referenced case will be closed. If there is a need to contact Genlyte Thomas Group regarding this case, any future verbal contact or written correspondence should be made directly to:

Mr. Randy Holub
Genlyte Thomas Group, LLC
4360 Brownsboro Road, Suite 300
Louisville, Kentucky 40207-1603
Tel: 502-893-4611

Should you have any questions or comments regarding this PA/SI report update, please do not hesitate to contact me directly at (609) 860-0590.

Sincerely,

BLASLAND, BOUCK & LEE, INC.


Kris D. Hallinger
Associate

KDH/cml
Enclosure

cc: Mr. Randy Holub, Genlyte Thomas Group, LLC
Mr. John Thelen, Blasland, Bouck and Lee, Inc.

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

A:\38601797.doc

TABLE 2
SOIL BORING LOG / PID FIELD SCREENING RESULTS
 Genlyte - Stonco Facility
 Union, New Jersey

SOIL BORING ID		A-4
Sampling Method		Geoprobe
Depth Interval (ft. bgs)	PID	June 1, 2000
0.0		
0.5	0	Brown fine SAND and SILT, trace
1.0	0	subangular to subrounded fine
1.5	0	Gravel, trace Clay, moist (fill
2.0	0	material).
2.5	0	
3.0	0	
3.5	0	
4.0		
4.5	3.6	Brown fine SAND and SILT, trace
5.0	0.2	subangular to subrounded fine
5.5	0.7	Gravel, trace Clay, moist (fill
6.0	0.2	material).
6.5	0.2	
7.0	0.4	
7.5		
8.0		
8.5		
9.0		
9.5	0.4	Brown fine SAND and SILT, trace
10.0	0.4	subangular to subrounded fine
10.5	0.2	Gravel, trace Clay, moist (fill
11.0	21.4	material).
11.5	59.4	
12.0	12.4	
12.5	4.3	
13.0	8.2	
Sample Interval (ft. bgs)		10.0-10.5 and 12.0-12.5
Analysis		TPH and VOCs

NOTES:

Soil samples were collected at all locations using the methanol preservation method for VOC analysis.

TPH: Total Petroleum Hydrocarbons.

VOC: Volatile Organic Compounds.

PID: Photoionization detector.

bgs: Below Ground Surface.

Attachment I

11/97

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF FIELD OPERATIONS-ISR INITIAL NOTICE
P.O. BOX 435
401 EAST STATE STREET
TRENTON, NJ 08625-0435

10/2000

INDUSTRIAL SITE RECOVERY ACT

NEGATIVE DECLARATION AFFIDAVIT

This document shall be submitted with the preliminary assessment report, site investigation report or remedial action report, as applicable. This document demonstrates that there have been no discharges of a hazardous substance or hazardous waste at the industrial establishment or that any discharged hazardous substance or hazardous waste on or emanating from the industrial establishment has been remediated in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E and any applicable remediation standards.

1. A. Industrial Establishment

Name Stonco Lighting Telephone Number (908) 964-7000Street Address 2345 Vauxhall RoadCity or Town Union State NJ Zip Code 07083Municipality Union Township County UnionB. Tax Block Number(s) 5809 Tax Lot Number(s) 32,34,35 *ok*C. Standard Industrial Classification (SIC) Number 3646

D. Current Property Owner(s)

Name Genlyte Thomas Group, LLCTelephone Number (502)893-4811

Firm _____

Street Address 4360 Brownsboro Road, Suite 300Municipality Louisville State KY Zip Code 40207-1203

E. Current Business Owner (If different from 1.A above)

Name Stonco Lighting Telephone Number _____

Firm _____

Street Address _____

Municipality _____ State _____ Zip Code _____

2. I hereby state that a preliminary assessment report, site investigation report and/or a remedial action report as applicable has been completed at the industrial establishment listed above, in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E as evidenced by either the attached preliminary assessment report, site investigation report and/or a remedial action report as applicable, or as evidenced by the previously submitted preliminary assessment report, site investigation report and/or a remedial action report as applicable.

Based on the preliminary assessment report, site investigation report and/or a remedial action report as applicable, (check the appropriate statement)

- ☐ there has been no discharge of a hazardous substance or hazardous waste on or from the industrial establishment; or
- ☒ any discharge(s) of a hazardous substance or hazardous waste on or from the industrial establishment have been remediated in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E and in accordance with any applicable remediation standards.

CERTIFICATION:

The following certification shall be signed pursuant to the requirements of N.J.A.C. 7:26B-1.6(e).

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13.

Typed/Printed Name Mr. Randy Holub Title Safety and Security Manager

Signature R. P. Holub

Date October 5th, 2000

Sworn to and Subscribed Before Me

on this Fifth

Date of October, 2000

Notary Jeanine K. Murphy

Jeanine K. Murphy, Notary Public
State at Large, Kentucky
My Commission Expires 11/19/2000

Attachment J



State of New Jersey

Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

Bureau of Field Operations
P.O. Box 438
401 East State Street
Trenton, NJ 08625-0438

Mr. Randy Holub
Stonco Lighting
2345 Vauxhall Road
Union, NJ 07083

OCT 25 2000

RECEIVED

NOV 03 2000

L. Holub

Re: Leasehold, Unrestricted Use, No Further Action Letter and Covenant Not to Sue
Industrial Establishment: Stonco Lighting
Address: 2345 Vauxhall Road
Union Twp., Union County
Block 6609 Lot 32, 34, & 35 [Leasehold Portion]
ISRA Case #E98203
ISRA Transaction: Joint Venture
Negative Declaration Affidavit dated: 9/1/2000

Dear Mr. Holub:

Pursuant to N.J.S.A. 68:10B-13.1 and N.J.A.C. 7:26C, the New Jersey Department of Environmental Protection (Department) makes a determination that no further action is necessary for the remediation of the industrial establishment as specifically referenced above, except as noted below, so long as Stonco Lighting did not withhold any information from the Department. This action is based upon information in the Department's case file and Stonco Lighting's final certified affidavit dated 11/29/99. In issuing this No Further Action Determination and Covenant Not to Sue, the Department has relied upon the certified representations and information provided to the Department.

By issuance of this No Further Action Determination, the Department acknowledges the completion of a Preliminary Assessment and Site Investigation pursuant to the Technical Requirements for Site Remediation (N.J.A.C. 7:26E) for the referenced industrial establishment.

NO FURTHER ACTION CONDITIONS

As a condition of this No Further Action Determination Stonco Lighting shall comply with each of the following:

Name and Address Changes

Pursuant to N.J.S.A. 68:10B-12, Stonco Lighting and the Successors shall inform the Department in writing whenever its name or address changes, within 14 calendar days after the change.

COVENANT NOT TO SUE

The Department issues this Covenant Not to Sue pursuant to N.J.S.A. 58:10B-13.1. That statute requires a covenant not to sue with each no further action letter. However, in accordance with N.J.S.A. 58:10B-13.1, nothing in this Covenant shall benefit any person who is liable, pursuant to the Spill Compensation and Control Act (Spill Act), N.J.S.A. 58:10-23.11, for cleanup and removal costs and the Department makes no representation by the issuance of this Covenant, either express or implied, as to the Spill Act liability of any person.

The Department covenants, except as provided in the preceding paragraph, that it will not bring any civil action against the following:

- (a) the person who undertook the remediation;
- (b) subsequent owners of the subject property;
- (c) subsequent lessees of the subject property; and
- (d) subsequent operators at the subject property.

for the purposes of requiring remediation to address contamination which existed prior to the date of the final certified affidavit for the real property at the industrial establishment identified above, or payment of cleanup and removal costs for such additional remediation.

The Department may revoke this Covenant at any time after providing notice upon its determination that either:

- (a) any person with the legal obligation to comply with any condition in this No Further Action Letter has failed to do so; or
- (b) any person with the legal obligation to maintain or monitor any engineering or institutional control has failed to do so.

This Covenant Not to Sue, which the Department has executed in duplicate, shall take effect immediately once the person who undertook the remediation has signed and dated the Covenant Not to Sue in the lines supplied below and the Department has received one copy of this document with original signatures of the Department and the person who undertook the remediation.

Name/Printed: RANDOLPH P. HEBB

Signature: R. P. Hebb

Title: SAFETY & SECURITY MGR

Dated: 11/10/00

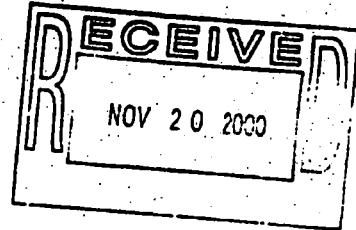
stonco

NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Name: Vincent S. Krisak, Section Chief
Bureau of Field Operations

Signature: *V. S. Krisak*

Dated: 10/25/00



Thank you for your attention to these matters. If you have any questions, please contact Charles
Salter case manager at (800)633-0708.

Sincerely,

V. S. Krisak

Vincent S. Krisak, Section Chief
Bureau of Field Operations

cc County Health Department
Charles Salter, BFO Case Manager
Kris D. Hallinger, BBL

Attachment K

Case Narrative:

KCS Lighting Inc #10090014

The National Environmental Laboratory Accreditation Conference (NELAC) is a voluntary environmental laboratory accreditation association of State and Federal agencies. NELAC established and promoted a national accreditation program that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAC accredited. The Laboratory tests that are accredited have met all the requirements established under the NELAC Standards.

Comment(s):

No comment.

Data Qualifier(s):

- U- The analyte was not detected at or above the Reporting Limit.
- J- The identification of the analyte is acceptable; the reported value is an estimate.
- K- The identification of the analyte is acceptable; the reported value may be biased high.
- L- The identification of the analyte is acceptable; the reported value may be biased low.
- NJ- There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.

Reporting Limit(s):

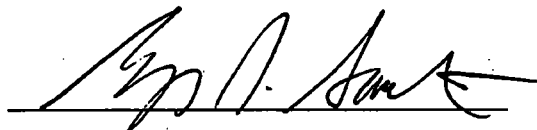
The Laboratory was able to achieve the Contract Required Quantitation Limits (CRQLs), where applicable, for each analyte requested.

Method(s):

All methods that are NELAC accredited in the Laboratory are noted with "NELAC" at the end of the method reference.

- TCL Volatile Organic Analysis (VOA), EPA SOP-C-123 (GC/MS Method)

Approval: _____



Date: _____

10-19-2010

K



U.S. Environmental Protection Agency
Region 2 Laboratory
2890 Woodbridge Avenue
Edison, NJ 08837

Data Report: KCS LIGHTING INC

Project Number: 10090014

Program: Y206E

Project Leader: STEVEN HOKE

Remark Codes	Explanation
U	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT.
J	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE IS AN ESTIMATE.
UJ	THE ANALYTE WAS NOT DETECTED AT OR ABOVE THE REPORTING LIMIT. THE REPORTING LIMIT IS AN ESTIMATE.
N	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION.
NJ	THERE IS PRESUMPTIVE EVIDENCE THAT THE ANALYTE IS PRESENT; THE ANALYTE IS REPORTED AS A TENTATIVE IDENTIFICATION. THE REPORTED VALUE IS AN ESTIMATE.
R	THE PRESENCE OR ABSENCE OF THE ANALYTE CANNOT BE DETERMINED FROM THE DATA DUE TO SEVERE QUALITY CONTROL PROBLEMS. THE DATA ARE REJECTED AND CONSIDERED UNUSABLE.
K	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED HIGH. THE ACTUAL VALUE IS EXPECTED TO BE LESS THAN THE REPORTED VALUE.
L	THE IDENTIFICATION OF THE ANALYTE IS ACCEPTABLE; THE REPORTED VALUE MAY BE BIASED LOW. THE ACTUAL VALUE IS EXPECTED TO BE GREATER THAN THE REPORTED VALUE.
NV	NOT VALIDATED
INC	RESULT NOT ENTERED



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04093

Field/Station ID: SB-4S

Date Received: 9/8/2010

Matrix: Soil

Sample Description:

Analysis Type: VOA TCL LOW SOM1.1 GCMS SOLID

CAS Number	Analyte Name	Result	Remark Codes	Units
75-71-8	DICHLORODIFLUOROMETHANE	---	5.8U	ug/Kg
74-87-3	CHLOROMETHANE	---	5.8U	ug/Kg
75-01-4	VINYL CHLORIDE	---	5.8U	ug/Kg
74-83-9	BROMOMETHANE	---	5.8U	ug/Kg
75-00-3	CHLOROETHANE	---	5.8U	ug/Kg
75-69-4	TRICHLOROFLUOROMETHANE	---	5.8U	ug/Kg
75-35-4	1,1-DICHLOROETHENE	---	5.8U	ug/Kg
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.8U	ug/Kg
75-15-0	CARBON DISULFIDE	---	5.8U	ug/Kg
67-64-1	ACETONE	---	12U	ug/Kg
79-20-9	METHYL ACETATE	---	5.8U	ug/Kg
75-09-2	METHYLENE CHLORIDE	---	5.8U	ug/Kg
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.8U	ug/Kg
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.8U	ug/Kg
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.8U	ug/Kg
75-34-3	1,1-DICHLOROETHANE	---	5.8U	ug/Kg
78-93-3	2-BUTANONE	---	12U	ug/Kg
67-66-3	CHLOROFORM	---	5.8U	ug/Kg
71-55-6	1,1,1-TRICHLOROETHANE	---	5.8U	ug/Kg
110-82-7	CYCLOHEXANE	---	5.8U	ug/Kg
56-23-5	CARBON TETRACHLORIDE	---	5.8U	ug/Kg
107-06-2	1,2-DICHLOROETHANE	---	5.8U	ug/Kg
71-43-2	BENZENE	---	5.8U	ug/Kg
79-01-6	TRICHLOROETHENE	---	5.8U	ug/Kg
108-87-2	METHYLCYCLOHEXANE	---	5.8U	ug/Kg
78-87-5	1,2-DICHLOROPROPANE	---	5.8U	ug/Kg
75-27-4	BROMODICHLOROMETHANE	---	5.8U	ug/Kg
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.8U	ug/Kg
108-10-1	4-METHYL-2-PENTANONE	---	12U	ug/Kg
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.8U	ug/Kg
108-88-3	TOLUENE	---	5.8U	ug/Kg
79-00-5	1,1,2-TRICHLOROETHANE	---	5.8U	ug/Kg
127-18-4	TETRACHLOROETHENE	---	5.8U	ug/Kg
591-78-6	2-HEXANONE	---	12U	ug/Kg
106-93-4	1,2-DIBROMOETHANE	---	5.8U	ug/Kg
124-48-1	DIBROMOCHLOROMETHANE	---	5.8U	ug/Kg
108-90-7	CHLOROBENZENE	---	5.8U	ug/Kg
100-41-4	ETHYLBENZENE	---	5.8U	ug/Kg
1330-20-7	M+P-XYLENE	---	5.8U	ug/Kg
95-47-6	O-XYLENE	---	5.8U	ug/Kg
100-42-5	STYRENE	---	5.8U	ug/Kg
75-25-2	BROMOFORM	---	5.8U	ug/Kg

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04093

Field/Station ID: SB-4S

Date Received: 9/8/2010

Matrix: Soil

Sample Description:

Analysis Type: VOA TCL LOW SOM1.1 GCMS SOLID

CAS Number	Analyte Name	Result	Remark Codes	Units
98-82-8	ISOPROPYLBENZENE	---	5.8U	ug/Kg
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.8U J	ug/Kg
541-73-1	1,3-DICHLOROBENZENE	---	5.8U J	ug/Kg
106-46-7	1,4-DICHLOROBENZENE	---	5.8U	ug/Kg
95-50-1	1,2-DICHLOROBENZENE	---	5.8U	ug/Kg
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.8U	ug/Kg
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.8U	ug/Kg
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.8U	ug/Kg
74-97-5	BROMOCHLOROMETHANE	---	5.8U	ug/Kg

AM04094

Field/Station ID: SB-3S

Date Received: 9/8/2010

Matrix: Soil

Sample Description:

Analysis Type: VOA TCL LOW SOM1.1 GCMS SOLID

CAS Number	Analyte Name	Result	Remark Codes	Units
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/Kg
74-87-3	CHLOROMETHANE	---	5.0U	ug/Kg
75-01-4	VINYL CHLORIDE	---	5.0U	ug/Kg
74-83-9	BROMOMETHANE	---	5.0U	ug/Kg
75-00-3	CHLOROETHANE	---	5.0U	ug/Kg
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/Kg
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/Kg
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/Kg
75-15-0	CARBON DISULFIDE	---	5.0U	ug/Kg
67-64-1	ACETONE	---	10U	ug/Kg
79-20-9	METHYL ACETATE	---	5.0U	ug/Kg
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/Kg
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/Kg
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/Kg
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/Kg
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/Kg
78-93-3	2-BUTANONE	---	10U	ug/Kg
67-66-3	CHLOROFORM	---	5.0U	ug/Kg

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM

Page 3 of 26



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04094

Field/Station ID: SB-3S

Date Received: 9/8/2010

Matrix: Soil

Sample Description:

Analysis Type: VOA TCL LOW SOM1.1 GCMS SOLID

CAS Number	Analyte Name	Result	Remark Codes	Units
71-55-6	1,1,1-TRICHLOROETHANE	---	5.0U	ug/Kg
110-82-7	CYCLOHEXANE	---	5.0U	ug/Kg
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/Kg
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/Kg
71-43-2	BENZENE	---	5.0U	ug/Kg
79-01-6	TRICHLOROETHENE	---	5.0U	ug/Kg
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/Kg
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/Kg
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/Kg
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/Kg
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/Kg
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/Kg
108-88-3	TOLUENE	---	5.0U	ug/Kg
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/Kg
127-18-4	TETRACHLOROETHENE	---	5.0U	ug/Kg
591-78-6	2-HEXANONE	---	10U	ug/Kg
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/Kg
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/Kg
108-90-7	CHLOROBENZENE	---	5.0U	ug/Kg
100-41-4	ETHYLBENZENE	---	5.0U	ug/Kg
1330-20-7	M+P-XYLENE	---	5.0U	ug/Kg
95-47-6	O-XYLENE	---	5.0U	ug/Kg
100-42-5	STYRENE	---	5.0U	ug/Kg
75-25-2	BROMOFORM	---	5.0U	ug/Kg
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/Kg
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U J	ug/Kg
541-73-1	1,3-DICHLOROBENZENE	---	5.0U J	ug/Kg
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/Kg
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/Kg
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/Kg
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/Kg
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/Kg
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/Kg



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04095

Field/Station ID: SB-3B

Date Received: 9/8/2010

Matrix: Soil

Sample Description:

Analysis Type: VOA TCL LOW SOM1.1 GCMS SOLID

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
75-71-8	DICHLORODIFLUOROMETHANE	---	4.6U	ug/Kg
74-87-3	CHLOROMETHANE	---	4.6U	ug/Kg
75-01-4	VINYL CHLORIDE	---	4.6U	ug/Kg
74-83-9	BROMOMETHANE	---	4.6U	ug/Kg
75-00-3	CHLOROETHANE	---	4.6U	ug/Kg
75-69-4	TRICHLOROFLUOROMETHANE	---	4.6U	ug/Kg
75-35-4	1,1-DICHLOROETHENE	---	4.6U	ug/Kg
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	4.6U	ug/Kg
75-15-0	CARBON DISULFIDE	---	4.6U	ug/Kg
67-64-1	ACETONE	---	9.2U	ug/Kg
79-20-9	METHYL ACETATE	---	4.6U	ug/Kg
75-09-2	METHYLENE CHLORIDE	---	4.6U	ug/Kg
156-60-5	TRANS-1,2-DICHLOROETHENE	---	4.6U	ug/Kg
156-59-2	CIS-1,2-DICHLOROETHENE	---	4.6U	ug/Kg
1634-04-4	METHYL TERT-BUTYL ETHER	---	4.6U	ug/Kg
75-34-3	1,1-DICHLOROETHANE	---	4.6U	ug/Kg
78-93-3	2-BUTANONE	---	9.2U	ug/Kg
67-66-3	CHLOROFORM	---	4.6U	ug/Kg
71-55-6	1,1,1-TRICHLOROETHANE	---	4.6U	ug/Kg
110-82-7	CYCLOHEXANE	---	4.6U	ug/Kg
56-23-5	CARBON TETRACHLORIDE	---	4.6U	ug/Kg
107-06-2	1,2-DICHLOROETHANE	---	4.6U	ug/Kg
71-43-2	BENZENE	---	4.6U	ug/Kg
79-01-6	TRICHLOROETHENE	---	4.6U	ug/Kg
108-87-2	METHYLCYCLOHEXANE	---	4.6U	ug/Kg
78-87-5	1,2-DICHLOROPROPANE	---	4.6U	ug/Kg
75-27-4	BROMODICHLOROMETHANE	---	4.6U	ug/Kg
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	4.6U	ug/Kg
108-10-1	4-METHYL-2-PENTANONE	---	9.2U	ug/Kg
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	4.6U	ug/Kg
108-88-3	TOLUENE	---	4.6U	ug/Kg
79-00-5	1,1,2-TRICHLOROETHANE	---	4.6U	ug/Kg
127-18-4	TETRACHLOROETHENE	11		ug/Kg
591-78-6	2-HEXANONE	---	9.2U	ug/Kg
106-93-4	1,2-DIBROMOETHANE	---	4.6U	ug/Kg
124-48-1	DIBROMOCHLOROMETHANE	---	4.6U	ug/Kg
108-90-7	CHLOROBENZENE	---	4.6U	ug/Kg
100-41-4	ETHYLBENZENE	---	4.6U	ug/Kg

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04095

Field/Station ID: SB-3B

Date Received: 9/8/2010

Matrix: Soil

Sample Description:

Analysis Type: VOA TCL LOW SOM1.1 GCMS SOLID

CAS Number	Analyte Name	Result	Remark Codes	Units
1330-20-7	M+P-XYLENE	---	4.6U	ug/Kg
95-47-6	O-XYLENE	---	4.6U	ug/Kg
100-42-5	STYRENE	---	4.6U	ug/Kg
75-25-2	BROMOFORM	---	4.6U	ug/Kg
98-82-8	ISOPROPYLBENZENE	---	4.6U	ug/Kg
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	4.6U J	ug/Kg
541-73-1	1,3-DICHLOROBENZENE	---	4.6U J	ug/Kg
106-46-7	1,4-DICHLOROBENZENE	---	4.6U	ug/Kg
95-50-1	1,2-DICHLOROBENZENE	---	4.6U	ug/Kg
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	4.6U	ug/Kg
0120-82-1	1,2,4-TRICHLOROBENZENE	---	4.6U	ug/Kg
87-61-6	1,2,3-TRICHLOROBENZENE	---	4.6U	ug/Kg
74-97-5	BROMOCHLOROMETHANE	---	4.6U	ug/Kg

AM04120

Field/Station ID: TB-1

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04120

Field/Station ID: TB-1

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	---	5.0U	ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	---	5.0U	ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	---	5.0U	ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04121

Field/Station ID: FB-1
Matrix: Aqueous

Date Received: 9/9/2010

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	---	5.0U	ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	---	5.0U	ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	---	5.0U	ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04121

Field/Station ID: FB-1

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L

AM04122

Field/Station ID: SB-2

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	24	K	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04122

Field/Station ID: SB-2

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
156-59-2	CIS-1,2-DICHLOROETHENE	12		ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	---	5.0U	ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	9.7		ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	8.7		ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L
	HEXANAL ; RT=8.51	7.2	NJ	ug/L
	CIS-1-BUTENE, 1-BUTOXY ; RT=10.72	7.5	NJ	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM

Page 10 of 26



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04122 Field/Station ID: SB-2
Matrix: Aqueous
Sample Description:

Date Received: 9/9/2010

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
	HEPTANE, 2,5-DIMETHYL ; RT=11.50	11	NJ	ug/L
	NONANAL ; RT=12.50	7.9	NJ	ug/L

AM04123 Field/Station ID: SB-2
Matrix: Aqueous
Sample Description:

Date Received: 9/9/2010

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	10	K	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L
156-59-2	CIS-1,2-DICHLOROETHENE	50		ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	---	5.0U	ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	13		ug/L



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04123

Field/Station ID: SB-3

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	5.1		ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L

AM04124

Field/Station ID: SB-4

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM

Page 12 of 26



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04124

Field/Station ID: SB-4

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	41	K	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L
156-59-2	CIS-1,2-DICHLOROETHENE	19		ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	---	5.0U	ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	14		ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	5.9		ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04124

Field/Station ID: SB-4

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L

AM04125

Field/Station ID: TW-10

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	200		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	5.0		ug/L



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04125

Field/Station ID: TW-10

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	79		ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	250		ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	---	5.0U	ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L
	1-HEXANOL, 2-ETHYL ; RT=11.50	11	NJ	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04126

Field/Station ID: TW-11

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	240		ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	21		ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	---	5.0U	ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM

Page 16 of 26



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04126

Field/Station ID: TW-11

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L
	1-HEXANOL, 2-ETHYL ; RT=11.50	6.9	NJ	ug/L

AM04127

Field/Station ID: SB-1

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	12	K	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04127

Field/Station ID: SB-1

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	---	5.0U	ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	---	5.0U	ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	---	5.0U	ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04128

Field/Station ID: FB-2

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	---	5.0U	ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	---	5.0U	ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	---	5.0U	ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04128

Field/Station ID: FB-2

Date Received: 9/9/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L

AM04129

Field/Station ID: SB-1S

Date Received: 9/9/2010

Matrix: Soil

Sample Description:

Analysis Type: VOA TCL LOW SOM1.1 GCMS SOLID

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
75-71-8	DICHLORODIFLUOROMETHANE	---	5.1U	ug/Kg
74-87-3	CHLOROMETHANE	---	5.1U	ug/Kg
75-01-4	VINYL CHLORIDE	---	5.1U	ug/Kg
74-83-9	BROMOMETHANE	---	5.1U	ug/Kg
75-00-3	CHLOROETHANE	---	5.1U	ug/Kg
75-69-4	TRICHLOROFLUOROMETHANE	---	5.1U	ug/Kg
75-35-4	1,1-DICHLOROETHENE	---	5.1U	ug/Kg
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.1U	ug/Kg
75-15-0	CARBON DISULFIDE	---	5.1U	ug/Kg
67-64-1	ACETONE	---	10U	ug/Kg
79-20-9	METHYL ACETATE	---	5.1U	ug/Kg
75-09-2	METHYLENE CHLORIDE	---	5.1U	ug/Kg
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.1U	ug/Kg
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.1U	ug/Kg
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.1U	ug/Kg

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM

Page 20 of 26



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04129

Field/Station ID: SB-1S

Date Received: 9/9/2010

Matrix: Soil

Sample Description:

Analysis Type: VOA TCL LOW SOM1.1 GCMS SOLID

CAS Number	Analyte Name	Result	Remark Codes	Units
75-34-3	1,1-DICHLOROETHANE	---	5.1U	ug/Kg
78-93-3	2-BUTANONE	---	10U	ug/Kg
67-66-3	CHLOROFORM	---	5.1U	ug/Kg
71-55-6	1,1,1-TRICHLOROETHANE	---	5.1U	ug/Kg
110-82-7	CYCLOHEXANE	---	5.1U	ug/Kg
56-23-5	CARBON TETRACHLORIDE	---	5.1U	ug/Kg
107-06-2	1,2-DICHLOROETHANE	---	5.1U	ug/Kg
71-43-2	BENZENE	---	5.1U	ug/Kg
79-01-6	TRICHLOROETHENE	---	5.1U	ug/Kg
108-87-2	METHYLCYCLOHEXANE	---	5.1U	ug/Kg
78-87-5	1,2-DICHLOROPROPANE	---	5.1U	ug/Kg
75-27-4	BROMODICHLOROMETHANE	---	5.1U	ug/Kg
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.1U	ug/Kg
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/Kg
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.1U	ug/Kg
108-88-3	TOLUENE	---	5.1U	ug/Kg
79-00-5	1,1,2-TRICHLOROETHANE	---	5.1U	ug/Kg
127-18-4	TETRACHLOROETHENE	---	5.1U	ug/Kg
591-78-6	2-HEXANONE	---	10U	ug/Kg
106-93-4	1,2-DIBROMOETHANE	---	5.1U	ug/Kg
124-48-1	DIBROMOCHLOROMETHANE	---	5.1U	ug/Kg
108-90-7	CHLOROBENZENE	---	5.1U	ug/Kg
100-41-4	ETHYLBENZENE	---	5.1U	ug/Kg
1330-20-7	M+P-XYLENE	---	5.1U	ug/Kg
95-47-6	O-XYLENE	---	5.1U	ug/Kg
100-42-5	STYRENE	---	5.1U	ug/Kg
75-25-2	BROMOFORM	---	5.1U	ug/Kg
98-82-8	ISOPROPYLBENZENE	---	5.1U	ug/Kg
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.1U J	ug/Kg
541-73-1	1,3-DICHLOROBENZENE	---	5.1U J	ug/Kg
106-46-7	1,4-DICHLOROBENZENE	---	5.1U	ug/Kg
95-50-1	1,2-DICHLOROBENZENE	---	5.1U	ug/Kg
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.1U	ug/Kg
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.1U	ug/Kg
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.1U	ug/Kg
74-97-5	BROMOCHLOROMETHANE	---	5.1U	ug/Kg
	7H-DIBENZO[B,G]CARBAZOLE,7-METH;RT=10.91	13	NJ	ug/Kg



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04130

Field/Station ID: TB-2

Date Received: 9/10/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	---	5.0U	ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	---	5.0U	ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	---	5.0U	ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	---	5.0U	ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04130

Field/Station ID: TB-2

Date Received: 9/10/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L

AM04131

Field/Station ID: TW-9

Date Received: 9/10/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

CAS Number	Analyte Name	Result	Remark Codes	Units
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	310		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04131

Field/Station ID: TW-9

Date Received: 9/10/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	100		ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	5.2		ug/L
79-01-6	TRICHLOROETHENE	670		ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	11		ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L
100-41-4	ETHYLBENZENE	---	5.0U	ug/L
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L



U.S. EPA Region 2 Laboratory
Data Report

Duplicate TW-9

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04132

Field/Station ID: TW-11

Date Received: 9/10/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
75-71-8	DICHLORODIFLUOROMETHANE	---	5.0U	ug/L
74-87-3	CHLOROMETHANE	---	5.0U	ug/L
75-01-4	VINYL CHLORIDE	---	5.0U	ug/L
74-83-9	BROMOMETHANE	---	5.0U	ug/L
75-00-3	CHLOROETHANE	---	5.0U	ug/L
75-69-4	TRICHLOROFLUOROMETHANE	---	5.0U	ug/L
75-35-4	1,1-DICHLOROETHENE	250		ug/L
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	---	5.0U	ug/L
75-15-0	CARBON DISULFIDE	---	5.0U	ug/L
67-64-1	ACETONE	---	10U	ug/L
79-20-9	METHYL ACETATE	---	5.0U	ug/L
75-09-2	METHYLENE CHLORIDE	---	5.0U	ug/L
156-60-5	TRANS-1,2-DICHLOROETHENE	---	5.0U	ug/L
1634-04-4	METHYL TERT-BUTYL ETHER	---	5.0U	ug/L
75-34-3	1,1-DICHLOROETHANE	---	5.0U	ug/L
156-59-2	CIS-1,2-DICHLOROETHENE	---	5.0U	ug/L
78-93-3	2-BUTANONE	---	10U	ug/L
74-97-5	BROMOCHLOROMETHANE	---	5.0U	ug/L
67-66-3	CHLOROFORM	---	5.0U	ug/L
71-55-6	1,1,1-TRICHLOROETHANE	97		ug/L
110-82-7	CYCLOHEXANE	---	5.0U	ug/L
56-23-5	CARBON TETRACHLORIDE	---	5.0U	ug/L
71-43-2	BENZENE	---	5.0U	ug/L
107-06-2	1,2-DICHLOROETHANE	---	5.0U	ug/L
79-01-6	TRICHLOROETHENE	540		ug/L
78-87-5	1,2-DICHLOROPROPANE	---	5.0U	ug/L
75-27-4	BROMODICHLOROMETHANE	---	5.0U	ug/L
10061-01-5	CIS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
108-10-1	4-METHYL-2-PENTANONE	---	10U	ug/L
108-88-3	TOLUENE	---	5.0U	ug/L
10061-02-6	TRANS-1,3-DICHLOROPROPENE	---	5.0U	ug/L
79-00-5	1,1,2-TRICHLOROETHANE	---	5.0U	ug/L
127-18-4	TETRACHLOROETHENE	10		ug/L
108-87-2	METHYLCYCLOHEXANE	---	5.0U	ug/L
124-48-1	DIBROMOCHLOROMETHANE	---	5.0U	ug/L
106-93-4	1,2-DIBROMOETHANE	---	5.0U	ug/L
591-78-6	2-HEXANONE	---	10U	ug/L
108-90-7	CHLOROBENZENE	---	5.0U	ug/L
79-34-5	1,1,2,2-TETRACHLOROETHANE	---	5.0U	ug/L
100-41-4	ETHYLBENZENE	---	5.0U	ug/L

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM



U.S. EPA Region 2 Laboratory
Data Report

Duplicate TW-9

Survey Name: KCS LIGHTING INC

Project Number: 10090014

*Sorted By Sample ID

AM04132

Field/Station ID: TW-11

Date Received: 9/10/2010

Matrix: Aqueous

Sample Description:

Analysis Type: VOA SOM1.1-LOW GCMS AQUEOUS

<u>CAS Number</u>	<u>Analyte Name</u>	<u>Result</u>	<u>Remark Codes</u>	<u>Units</u>
179601-23-1	M/P-XYLENE	---	5.0U	ug/L
95-47-6	O-XYLENE	---	5.0U	ug/L
100-42-5	STYRENE	---	5.0U	ug/L
75-25-2	BROMOFORM	---	5.0U	ug/L
98-82-8	ISOPROPYLBENZENE	---	5.0U	ug/L
541-73-1	1,3-DICHLOROBENZENE	---	5.0U	ug/L
106-46-7	1,4-DICHLOROBENZENE	---	5.0U	ug/L
95-50-1	1,2-DICHLOROBENZENE	---	5.0U	ug/L
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	---	5.0U	ug/L
0120-82-1	1,2,4-TRICHLOROBENZENE	---	5.0U	ug/L
87-61-6	1,2,3-TRICHLOROBENZENE	---	5.0U	ug/L

Project Approval:

Date: 10-13-2010

Refer to Page 1 for an explanation of Remark Codes

Report Date: 10/18/2010 8:27AM

Report of Analysis

Page 1 of 2

Client Sample ID:	SB-5	Date Sampled:	10/19/10
Lab Sample ID:	JA59254-1	Date Received:	10/20/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 624		
Project:	STONCO, 2345 Vauxhall Road, Union, NJ		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T152202.D	1	10/23/10	JNW	n/a	n/a	VT6044
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	3.9	ug/l	
71-43-2	Benzene	ND	1.0	0.27	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.34	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.29	ug/l	
75-25-2	Bromoform	ND	1.0	0.19	ug/l	
74-83-9	Bromomethane	ND	1.0	0.23	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.7	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.14	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.26	ug/l	
75-00-3	Chloroethane	ND	1.0	0.47	ug/l	
67-66-3	Chloroform	ND	1.0	0.17	ug/l	
74-87-3	Chloromethane	ND	1.0	0.16	ug/l	
98-82-8	Cumene	ND	1.0	0.28	ug/l	
110-82-7	Cyclohexane	ND	2.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.4	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.22	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.15	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.64	ug/l	
75-34-3	1,1-Dichloroethane	0.75	1.0	0.30	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.53	ug/l	
75-35-4	1,1-Dichloroethene	0.45	1.0	0.24	ug/l	J
156-59-2	cis-1,2-Dichloroethene	15.8	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.35	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.12	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
123-91-1	1,4-Dioxane	ND	130	53	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 2

Client Sample ID:	SB-5	Date Sampled:	10/19/10
Lab Sample ID:	JA59254-1	Date Received:	10/20/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 624		
Project:	STONCO, 2345 Vauxhall Road, Union, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
76-13-1	Freon 113	ND	2.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.4	ug/l	
75-09-2	Methylene chloride	ND	1.0	0.17	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.6	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.17	ug/l	
100-42-5	Styrene	ND	2.0	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.16	ug/l	
127-18-4	Tetrachloroethene	19.9	1.0	0.51	ug/l	
108-88-3	Toluene	ND	1.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.81	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	27.9	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.16	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.35	ug/l	
1330-20-7	Xylenes (total)	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4 (SUR)	108%		64-135%
2037-26-5	Toluene-D8 (SUR)	100%		76-117%
460-00-4	4-Bromofluorobenzene (SUR)	101%		72-122%
1868-53-7	Dibromofluoromethane (S)	101%		76-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 2

Client Sample ID: SB-7
 Lab Sample ID: JA59254-2
 Matrix: AQ - Ground Water
 Method: EPA 624
 Project: STONCO, 2345 Vauxhall Road, Union, NJ

Date Sampled: 10/19/10
 Date Received: 10/20/10
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T152201.D	1	10/23/10	JNW	n/a	n/a	VT6044
Run #2	T152267.D	5	10/26/10	JNW	n/a	n/a	VT6047

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	3.9	ug/l	
71-43-2	Benzene	ND	1.0	0.27	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.34	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.29	ug/l	
75-25-2	Bromoform	ND	1.0	0.19	ug/l	
74-83-9	Bromomethane	ND	1.0	0.23	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.7	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.25	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.14	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.26	ug/l	
75-00-3	Chloroethane	ND	1.0	0.47	ug/l	
67-66-3	Chloroform	0.46	1.0	0.17	ug/l	J
74-87-3	Chloromethane	ND	1.0	0.16	ug/l	
98-82-8	Cumene	ND	1.0	0.28	ug/l	
110-82-7	Cyclohexane	ND	2.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.23	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.18	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.4	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.22	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.15	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.24	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.64	ug/l	
75-34-3	1,1-Dichloroethane	0.74	1.0	0.30	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.53	ug/l	
75-35-4	1,1-Dichloroethene	29.1	1.0	0.24	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.8	1.0	0.24	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.35	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.12	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.19	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
123-91-1	1,4-Dioxane	ND	130	53	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 2

Client Sample ID:	SB-7	Date Sampled:	10/19/10
Lab Sample ID:	JA59254-2	Date Received:	10/20/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 624		
Project:	STONCO, 2345 Vauxhall Road, Union, NJ		

VOA TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
76-13-1	Freon 113	ND	2.0	1.2	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.7	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.4	ug/l	
75-09-2	Methylene chloride	ND	1.0	0.17	ug/l	
79-20-9	Methyl Acetate	ND	5.0	1.6	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.17	ug/l	
100-42-5	Styrene	ND	2.0	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.16	ug/l	
127-18-4	Tetrachloroethene	1.3	1.0	0.51	ug/l	
108-88-3	Toluene	ND	1.0	0.24	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.81	ug/l	
71-55-6	1,1,1-Trichloroethane	3.5	1.0	0.21	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.21	ug/l	
79-01-6	Trichloroethene	260 ^a	5.0	1.2	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.16	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.35	ug/l	
1330-20-7	Xylenes (total)	ND	1.0	0.35	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4 (SUR)	110%	108%	64-135%
2037-26-5	Toluene-D8 (SUR)	102%	101%	76-117%
460-00-4	4-Bromofluorobenzene (SUR)	99%	98%	72-122%
1868-53-7	Dibromofluoromethane (S)	101%	98%	76-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

A vertical dashed line runs down the left side of the page, consisting of a series of short, black, rectangular dashes.

Attachment L

NJDEP MOBILE ENVIRONMENTAL LABORATORY

FINAL REPORT

Vauxhall Road and Swanstrom Place

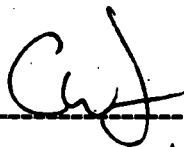
UNION TOWNSHIP, UNION COUNTY, NJ

SOIL SAMPLES

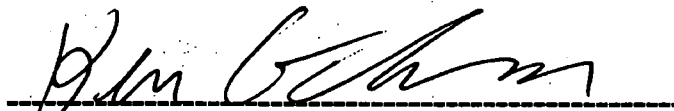
SAMPLES RECEIVED: 1 SEPTEMBER 2010

REPORT ISSUED: 16 SEPTEMBER 2010

JOB CODE: A605590P



ANALYZED BY



**KENNETH GLASSER
MOBILE LABORATORY PROGRAM MANAGER**

1.0 INTRODUCTION

On 1 September 2010, soil samples collected from Vauxhall Road and Swanstrom Place, Union Township, Union County, were delivered to the NJDEP Mobile Environmental Laboratory for analysis. The samples were analyzed for EPA 524 Volatile Organic Compounds by Purge and Trap Capillary Column Gas Chromatography Mass Spectrometry (GC/MS). Results are presented in the Analytical Results Reports, attached.

2.0 PROCEDURES

2.1 Field Sampling Procedures

A field sampling team led by Mr. Steve Hoke, BEMSA, collected soil samples using EnCore™ sampling devices. Additional samples for dry weight calculation were collected in 60cc glass jars with PTFE lined lids. All samples were stored at 4 degrees C until analysis.

2.2 Analytical Method

Samples for volatiles analysis were extracted into 25ml methanol and analyzed by Modified Mobile Lab Method 524 - Measurement of Purgeable VOCs in Methanol Preserved Soil Samples by GC/MS.

3.0 REPORTING

3.1 Internal Standards and Surrogate Spikes

Internal Standards (ISTD) and System Monitoring Compounds (SMC) have been added to the sample to check instrument performance and the analytical technique. They are not indicative of sample contamination. Continuing Calibration Standards were analyzed to verify GC/MS tune integrity.

3.2 Tentatively Identified Compounds (TICs)

Non-target compound peaks were identified by a computerized search of the NIST/EPA/NIH mass spectral library and quantitated using a relative response ratio of unity to the nearest ISTD. Results were sorted by area and the top ten peaks for each sample were reported in retention time order as TICs. A report showing the five best library matches for each peak is included with the analytical results reports for each sample.

3.3 Soil Sample Dry Weight and Method Reporting Limits (MRLs)

The MRLs for Modified Method 524 are based on a sample dry weight of 8.0 grams. Samples weighing less than 8.0 grams will be subject to correspondingly higher reporting limits and may require resampling.

3.4 Nonconformance Summary

None reported.

3.5 Comments

Significant concentrations of hydrocarbons and higher boiling point compounds were noted in each sample. Additional analyses for semivolatile organic compounds and TPH are suggested.

Please direct questions or comments to Kenneth Glasser or Corey Lakin at the NJDEP Mobile Environmental Laboratory, Windsor Industrial Park, Building 18F, Windsor, NJ, 08561.
Phone: 609-371-3981 Fax: 609-371-3986.

NJDEP MOBILE LABORATORY ANALYTICAL RESULTS REPORT

MODIFIED METHOD 524: Measurement Of Purgeable VOCs In Methanol Preserved Soil Samples By GC/MS

Site Name: Vauxhall Rd.+Swanstrom Pl. Field Sample Name: SB-5A SOIL
 Date Received: 9/1/10 Lab Data File Name: 09101068.D
 Date Analyzed: 09/10/10 17:56 Dried Sample Weight(gm): 15.1 Dilution 1: 1
 ID: Agilent Tech: 5973N 0.3.01.57 GC Column: VOCOL 60m .25mm ID 1.5um film

#	Compound Name	Soil Concentration		Ret Time Minutes	Quantitation Response	Quant m/z	Qual m/z	PPM MRL
		PPM	*					
1)	fluorobenzene	8.00	*ISTD	16.67	1.69E+07	96.00	69.95	—
2)	dichlorodifluoromethane	ND				85.05	87.05	0.20
3)	chloromethane	ND				50.00	52.00	0.20
4)	vinyl chloride	ND				62.05	64.05	0.20
5)	bromomethane	ND				94.05	96.05	0.20
6)	chloroethane	ND				64.05	66.05	0.20
7)	trichlorofluoromethane	ND				100.95	102.95	0.20
8)	1,1 dichloroethene	ND				61.00	95.95	0.20
9)	methylene chloride	ND				83.95	49.00	0.50
10)	trans-1,2-dichloroethene	ND				95.95	61.00	0.20
11)	1,1 dichloroethane	ND				63.00	65.00	0.20
12)	2,2 dichloropropane	ND				77.00	96.95	0.20
13)	cis-1,2-dichloroethene	ND				95.95	97.95	0.20
14)	chloroform	ND				82.95	84.95	0.20
15)	bromochloromethane	ND				127.95	129.95	0.20
16)	1,1,1 trichloroethane	ND				96.95	99.00	0.20
17)	1,1 dichloropropene	ND				75.00	109.95	0.20
18)	carbon tetrachloride	ND				116.95	118.95	0.20
19)	benzene	ND				78.00	77.00	0.20
20)	1,2 dichloroethane	ND				62.00	98.05	0.20
21)	trichloroethene	ND				130.00	95.00	0.50
22)	1,2 dichloropropane	ND				63.00	76.00	0.20
23)	bromodichloromethane	ND				82.95	84.95	0.20
24)	dibromomethane	ND				93.00	95.00	0.20
25)	cis-1,3-dichloropropene	ND				75.00	109.95	0.20
26)	toluene	ND				92.00	91.00	0.20
27)	trans-1,3-dichloropropene	ND				75.00	109.95	0.20
28)	1,1,2 trichloroethane	ND				83.00	85.00	0.20
29)	1,3 dichloropropane	ND				76.00	78.00	0.20
30)	tetrachloroethene	ND				165.90	128.95	0.20
31)	dibromochloromethane	ND				129.00	127.00	0.20
32)	1,2 dibromoethane	ND				106.95	108.95	0.20
33)	ethylbenzene	ND				106.00	91.00	0.20
34)	chlorobenzene	ND				112.05	77.00	0.20
35)	1,1,1,2 tetrachloroethane	ND				130.95	132.95	0.20
36)	m,p-xylene	ND				106.15	91.05	0.20
37)	o-xylene	ND				106.15	91.15	0.20

#	Compound Name	Soil Concentration		Ret Time Minutes	Quantitation Response	Quant m/z	Qual m/z	PPM MRL
		PPM	*					
38)	styrene	ND				104.05	78.10	0.20
39)	isopropylbenzene	0.16	J	29.69	1.57E+05	120.00	105.00	0.20
40)	bromoform	ND				172.90	174.90	0.20
41)	1,1,2,2 tetrachloroethane	ND				82.95	84.95	0.20
42)	4-bromofluorobenzene	8.75	*SMC	30.68	6.27E+06	95.00	173.95	—
43)	1,2,3 trichloropropane	ND				110.00	112.00	0.20
44)	n-propylbenzene	0.19	J	31.11	1.98E+05	120.00	91.00	0.20
45)	bromobenzene	ND				155.95	157.95	0.20
46)	1,3,5 trimethylbenzene	0.06	J	31.67	9.94E+04	120.00	105.00	0.20
47)	2-chlorotoluene	ND				91.05	126.05	0.20
48)	4-chlorotoluene	ND				91.15	126.05	0.20
49)	tert-butylbenzene	ND				119.15	91.15	0.20
50)	1,2,4 trimethylbenzene	1.42		33.12	2.07E+06	120.00	105.00	0.20
51)	sec-butylbenzene	1.52		33.73	1.28E+06	134.00	105.00	0.20
52)	4-isopropyltoluene	0.55		34.22	5.48E+05	134.00	119.00	0.20
53)	1,3 dichlorobenzene	ND				145.95	147.95	0.20
54)	1,4 dichlorobenzene	ND				145.95	147.95	0.20
55)	n-butylbenzene	ND				134.00	91.00	0.20
56)	1,2-dichlorobenzene-d4	8.80	*SMC	36.38	7.25E+06	151.90	149.90	—
57)	1,2 dichlorobenzene	ND				145.95	147.95	0.20
58)	1,2-dibromo-3-chloropropane	ND				75.00	154.95	2.50
59)	1,2,4 trichlorobenzene	ND				180.00	182.00	0.20
60)	hexachlorobutadiene	ND				224.90	226.90	0.20
61)	naphthalene	1.22		41.69	1.38E+06	128.05	0.00	0.20
62)	1,2,3 trichlorobenzene	ND				180.00	182.00	0.20
63)	MTBE	ND				73.1	57.05	1.50

GC/MS Operator

C. Lakin

Mobile Laboratory Manager

* LEGEND:

"J" = <MRL. NOTE: THE MRL IS BASED ON 8.0 GM DRIED SAMPLE WT IN 25 MLS METHANOL.

"ND" = NOT DETECTED

"B" = DETECTED IN BOTH SAMPLE & METHANOL BLANK

"ISTD" = INTERNAL STANDARD

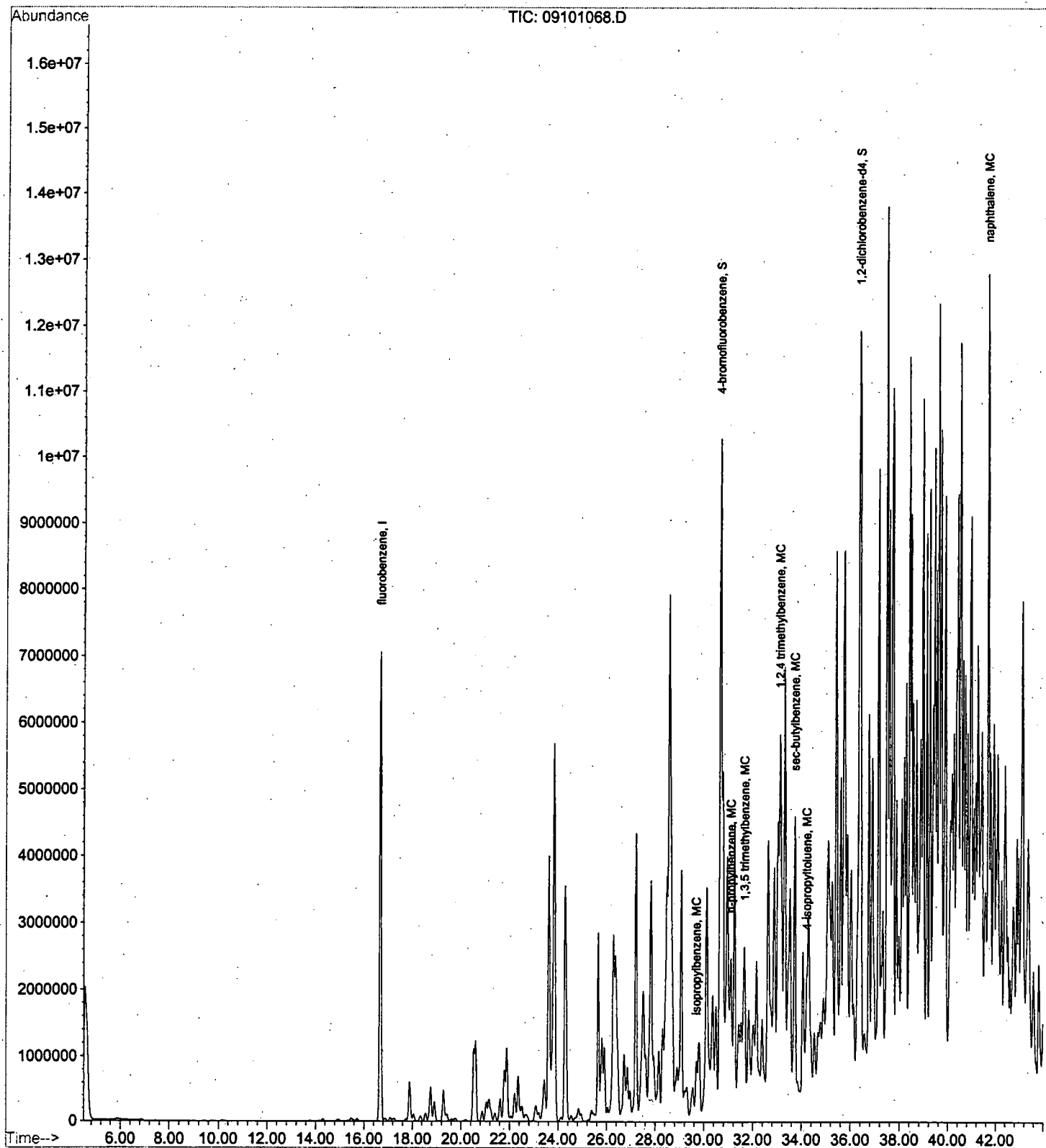
"SMC" = SYSTEM MONITORING COMPOUND

"E" = CONCENTRATION OF SPECIFIC COMPOUND EXCEEDED CALIBRATION RANGE UPPER LIMIT.

USE INDIVIDUAL RESULTS FROM DILUTED SAMPLES WHEN AVAILABLE.

Jones, R. P., and Clarke, J. U. (2005). "Analytical chemistry detection limits and the evaluation of dredged sediment," ERDC/TN EEDP-04-36, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

File : C:\HPCHEM\1\DATA\VAUXHA-1.09\09101068.D
Operator : CLAKIN
Acquired : 10 Sep 10 5:56 pm using AcqMethod VOL5973
Instrument : Instrumen
Sample Name: SB-5A
Misc Info : VAUXHALL RD & SWANSTROM PL / A605590P
Vial Number: 18



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\VAUXHA-1.09\09101068.D Vial: 18
Acq On : 10 Sep 10 5:56 pm Operator: CLAKIN
Sample : SB-5A Inst : Instrumen
Misc : VAUXHALL RD & SWANSTROM PL / A605590P Multiplr: 0.27
MS Integration Params: RTEINT.P
Quant Method : C:\HPCHEM\1\METHODS\VOL5973.M (RTE Integrator)
Title : NJDEP MOBILE LABORATORY
Library : C:\DATABASE\NBS75K.L

Peak Number 1 Octane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.83	5.12 PPM	32406900	fluorobenzene	16.67

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane		114	C8H18	000111-65-9	49
2	Octane, 2-methyl-		128	C9H20	003221-61-2	43
3	Cyclohexane, ethyl-		112	C8H16	001678-91-7	42
4	Octane, 4-methyl-		128	C9H20	002216-34-4	38
5	Hexane, 2,3,4-trimethyl-		128	C9H20	000921-47-1	38

Peak Number 2 Cyclohexanone, 2,3-dimethyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.58	8.69 PPM	55002100	fluorobenzene	16.67

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 2,3-dimethyl-		126	C8H14O	013395-76-1	68
2	Cyclohexane, propyl-		126	C9H18	001678-92-8	58
3	Cyclohexane, propyl-		126	C9H18	001678-92-8	58
4	Cyclohexane, propyl-		126	C9H18	001678-92-8	50
5	Cyclohexane, propyl-		126	C9H18	001678-92-8	50

Peak Number 3 Naphthalene, decahydro- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
35.76	5.25 PPM	33231200	fluorobenzene	16.67

Hit# of	5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, decahydro-		138	C10H18	000091-17-8	95
2	Naphthalene, decahydro-		138	C10H18	000091-17-8	95
3	Naphthalene, decahydro-, trans-		138	C10H18	000493-02-7	94
4	Naphthalene, decahydro-, trans-		138	C10H18	000493-02-7	94
5	Naphthalene, decahydro-, trans-		138	C10H18	000493-02-7	93

 Peak Number 4 Benzene, 4-ethyl-1,2-dimethyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.	
37.16	5.10 PPM	32325600	fluorobenzene	16.67	
Hit# of	5	Tentative ID	MW MolForm	CAS#	Qual
1		Benzene, 4-ethyl-1,2-dimethyl-	134 C10H14	000934-80-5	95
2		Benzene, 1-ethyl-2,4-dimethyl-	134 C10H14	000874-41-9	95
3		Benzene, 4-ethyl-1,2-dimethyl-	134 C10H14	000934-80-5	95
4		Benzene, 2-ethyl-1,3-dimethyl-	134 C10H14	002870-04-4	94
5		Benzene, 2-ethyl-1,3-dimethyl-	134 C10H14	002870-04-4	94

 Peak Number 5 Benzene, 1-methyl-4-(1-methyle Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.	
37.50	7.39 PPM	46800900	fluorobenzene	16.67	
Hit# of	5	Tentative ID	MW MolForm	CAS#	Qual
1		Benzene, 1-methyl-4-(1-methylethyl)	134 C10H14	000099-87-6	64
2		Benzene, 1-methyl-4-(1-methylethyl)	134 C10H14	000099-87-6	64
3		Benzene, 1-methyl-2-(1-methylethyl)	134 C10H14	000527-84-4	64
4		Benzene, methyl(1-methylethyl)-	134 C10H14	025155-15-1	64
5		Benzene, 1-methyl-2-(1-methylethyl)	134 C10H14	000527-84-4	64

 Peak Number 6 Benzene, 1,3-diethyl-5-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.	
37.75	6.97 PPM	44129600	fluorobenzene	16.67	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-5-methyl-	148	C11H16	002050-24-0	55
2	Benzene, 1,3-diethyl-5-methyl-	148	C11H16	002050-24-0	55
3	3-Octyne, 2,2,7-trimethyl-	152	C11H20	055402-13-6	35
4	Naphthalene, decahydro-2-methyl-	152	C11H20	002958-76-1	27
5	Benzene, diethylmethyl-	148	C11H16	025550-13-4	25

 Peak Number 7 Naphthalene, decahydro-2-methy Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.	
38.43	5.27 PPM	33380900	fluorobenzene	16.67	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, decahydro-2-methyl-	152	C11H20	002958-76-1	91
2	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	76
3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	62
4	Cyclododecene, (Z)-	166	C12H22	001129-89-1	46
5	trans-3a-Methylperhydroazulen-4(1H)	166	C11H18O	000000-00-0	38

 Peak Number 8 Benzene, 1-methyl-2-(1-methylethyl) Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
39.64	5.18 PPM	32831300	fluorobenzene	16.67
Hit# of	5	Tentative ID	MW MolForm	CAS# Qual
1		Benzene, 1-methyl-2-(1-methylethyl)	134 C10H14	000527-84-4 93
2		Benzene, 1-ethyl-2,3-dimethyl-	134 C10H14	000933-98-2 93
3		Benzene, methyl(1-methylethyl)-	134 C10H14	025155-15-1 87
4		Benzene, 1-ethyl-3,5-dimethyl-	134 C10H14	000934-74-7 87
5		Benzene, 1,2,3,4-tetramethyl-	134 C10H14	000488-23-3 87

 Peak Number 9 1H-Indene, 2,3-dihydro-5-methyl Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
39.91	6.13 PPM	38796800	fluorobenzene	16.67
Hit# of	5	Tentative ID	MW MolForm	CAS# Qual
1		1H-Indene, 2,3-dihydro-5-methyl-	132 C10H12	000874-35-1 76
2		Benzene, 2-ethenyl-1,3-dimethyl-	132 C10H12	002039-90-9 76
3		1H-Indene, 2,3-dihydro-4-methyl-	132 C10H12	000824-22-6 76
4		2,3-Dihydro-1-methylindene	132 C10H12	027133-93-3 70
5		Benzene, 2-ethenyl-1,4-dimethyl-	132 C10H12	002039-89-6 70

 Peak Number 10 1H-Indene, 2,3-dihydro-1,2-dimethyl Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
40.54	5.48 PPM	34681500	fluorobenzene	16.67
Hit# of	5	Tentative ID	MW MolForm	CAS# Qual
1		1H-Indene, 2,3-dihydro-1,2-dimethyl	146 C11H14	017057-82-8 45
2		1H-Indene, 2,3-dihydro-5,6-dimethyl	146 C11H14	001075-22-5 45
3		Naphthalene, 1,2,3,4-tetrahydro-1-methyl	146 C11H14	001559-81-5 45
4		1H-Indene, 2,3-dihydro-4,7-dimethyl	146 C11H14	006682-71-9 45
5		Benzene, (3-methyl-2-butenyl)-	146 C11H14	004489-84-3 43

09101068.D VOL5973.M Thu Sep 16 09:48:26 2010

NJDEP MOBILE LABORATORY ANALYTICAL RESULTS REPORT

MODIFIED METHOD 524: Measurement Of Purgeable VOCs In Methanol Preserved Soil Samples By GC/MS

Site Name: Vauxhall Rd.+Swanstrom Pl.
 Date Received: 9/1/10
 Date Analyzed: 09/10/10 20:48
 ID: Agilent Tech: 5973N 0.3.01.57

Field Sample Name: SB-5B SOIL
 Lab Data File Name: 09101071.D
 Dried Sample Weight(gm): 14.9 Dilution 1: 1
 GC Column: VOCOL 60m .25mm ID 1.5um film

#	Compound Name	Soil Concentration		Ret Time Minutes	Quantitation Response	Quant m/z	Qual m/z	PPM MRL
		PPM	*					
1)	fluorobenzene	8.00	*ISTD	16.67	2.14E+07	96.00	69.95	---
2)	dichlorodifluoromethane	ND				85.05	87.05	0.20
3)	chloromethane	ND				50.00	52.00	0.20
4)	vinyl chloride	ND				62.05	64.05	0.20
5)	bromomethane	ND				94.05	96.05	0.20
6)	chloroethane	ND				64.05	66.05	0.20
7)	trichlorofluoromethane	ND				100.95	102.95	0.20
8)	1,1 dichloroethene	ND				61.00	95.95	0.20
9)	methylene chloride	ND				83.95	49.00	0.50
10)	trans-1,2-dichloroethene	ND				95.95	61.00	0.20
11)	1,1 dichloroethane	ND				63.00	65.00	0.20
12)	2,2 dichloropropane	ND				77.00	96.95	0.20
13)	cis-1,2-dichloroethene	ND				95.95	97.95	0.20
14)	chloroform	ND				82.95	84.95	0.20
15)	bromochloromethane	ND				127.95	129.95	0.20
16)	1,1,1 trichloroethane	ND				96.95	99.00	0.20
17)	1,1 dichloropropene	ND				75.00	109.95	0.20
18)	carbon tetrachloride	ND				116.95	118.95	0.20
19)	benzene	ND				78.00	77.00	0.20
20)	1,2 dichloroethane	ND				62.00	98.05	0.20
21)	trichloroethene	ND				130.00	95.00	0.50
22)	1,2 dichloropropane	ND				63.00	76.00	0.20
23)	bromodichloromethane	ND				82.95	84.95	0.20
24)	dibromomethane	ND				93.00	95.00	0.20
25)	cis-1,3-dichloropropene	ND				75.00	109.95	0.20
26)	toluene	ND				92.00	91.00	0.20
27)	trans-1,3-dichloropropene	ND				75.00	109.95	0.20
28)	1,1,2 trichloroethane	ND				83.00	85.00	0.20
29)	1,3 dichloropropane	ND				76.00	78.00	0.20
30)	tetrachloroethene	0.04 J		23.75	3.56E+04	165.90	128.95	0.20
31)	dibromochloromethane	ND				129.00	127.00	0.20
32)	1,2 dibromoethane	ND				106.95	108.95	0.20
33)	ethylbenzene	ND				106.00	91.00	0.20
34)	chlorobenzene	ND				112.05	77.00	0.20
35)	1,1,1,2 tetrachloroethane	ND				130.95	132.95	0.20
36)	m,p-xylene	ND				106.15	91.05	0.20
37)	o-xylene	ND				106.15	91.15	0.20

#	Compound Name	Soil Concentration		Ret Time Minutes	Quantitation Response	Quant m/z	Qual m/z	PPM MRL
		PPM	*					
38)	styrene	ND				104.05	78.10	0.20
39)	isopropylbenzene	ND				120.00	105.00	0.20
40)	bromoform	ND				172.90	174.90	0.20
41)	1,1,2,2 tetrachloroethane	ND				82.95	84.95	0.20
42)	4-bromofluorobenzene	7.90	*SMC	30.68	7.19E+06	95.00	173.95	—
43)	1,2,3 trichloropropane	ND				110.00	112.00	0.20
44)	n-propylbenzene	ND				120.00	91.00	0.20
45)	bromobenzene	ND				155.95	157.95	0.20
46)	1,3,5 trimethylbenzene	ND				120.00	105.00	0.20
47)	2-chlorotoluene	ND				91.05	126.05	0.20
48)	4-chlorotoluene	ND				91.15	126.05	0.20
49)	tert-butylbenzene	ND				119.15	91.15	0.20
50)	1,2,4 trimethylbenzene	ND				120.00	105.00	0.20
51)	sec-butylbenzene	0.11	J	33.73	1.14E+05	134.00	105.00	0.20
52)	4-isopropyltoluene	ND				134.00	119.00	0.20
53)	1,3 dichlorobenzene	ND				145.95	147.95	0.20
54)	1,4 dichlorobenzene	ND				145.95	147.95	0.20
55)	n-butylbenzene	ND				134.00	91.00	0.20
56)	1,2-dichlorobenzene-d4	7.29	*SMC	36.38	7.63E+06	151.90	149.90	—
57)	1,2 dichlorobenzene	ND				145.95	147.95	0.20
58)	1,2-dibromo-3-chloropropane	ND				75.00	154.95	2.50
59)	1,2,4 trichlorobenzene	ND				180.00	182.00	0.20
60)	hexachlorobutadiene	ND				224.90	226.90	0.20
61)	naphthalene	0.66		41.68	9.39E+05	128.05	0.00	0.20
62)	1,2,3 trichlorobenzene	ND				180.00	182.00	0.20
63)	MTBE	ND				73.1	57.05	1.50

GC/MS Operator

C. Lakin

Mobile Laboratory Manager

* LEGEND:

"J" = <MRL. NOTE: THE MRL IS BASED ON 8.0 GM DRIED SAMPLE WT IN 25 MLS METHANOL.

"ND" = NOT DETECTED

"B" = DETECTED IN BOTH SAMPLE & METHANOL BLANK

"ISTD" = INTERNAL STANDARD

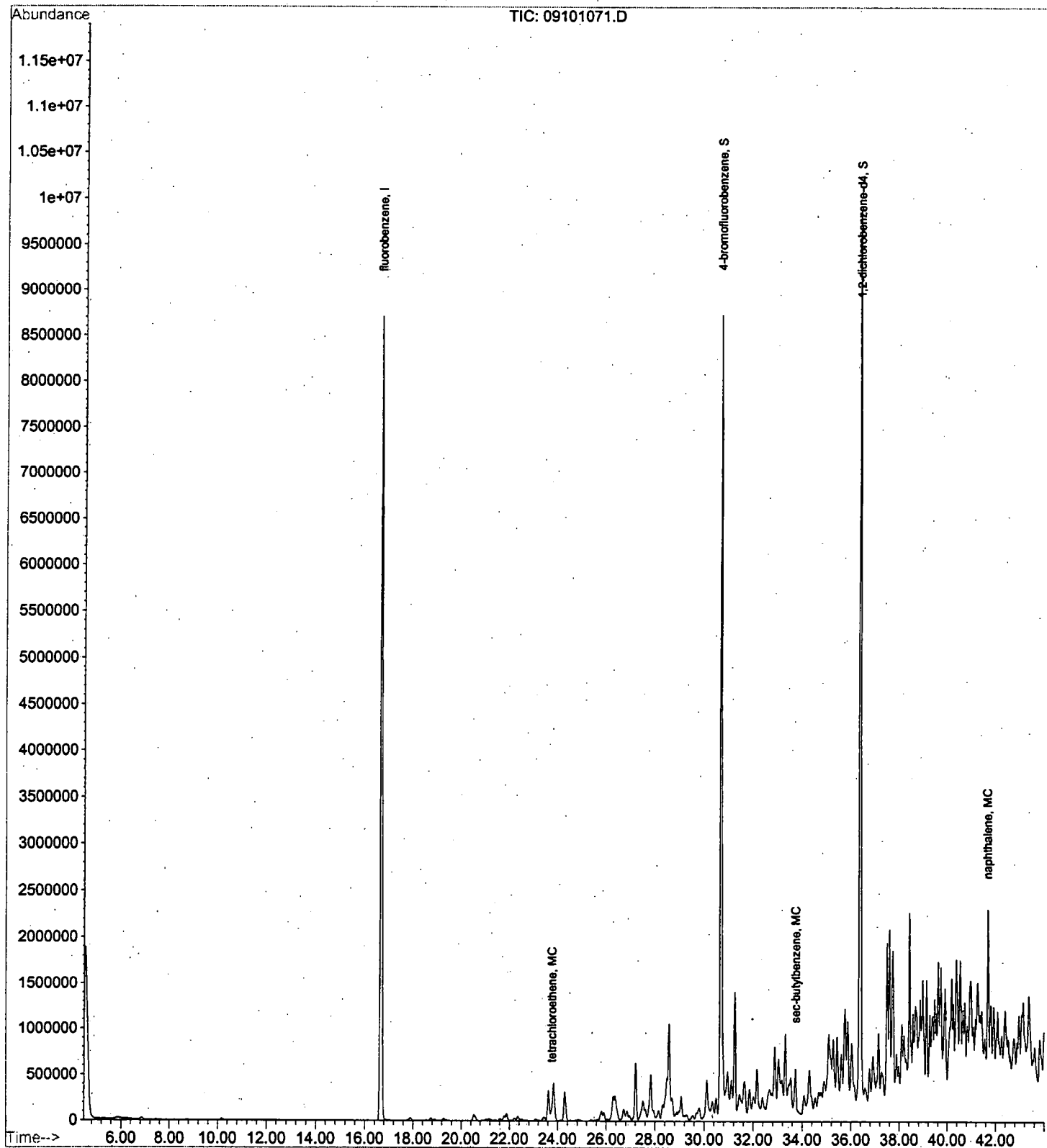
"SMC" = SYSTEM MONITORING COMPOUND

"E" = CONCENTRATION OF SPECIFIC COMPOUND EXCEEDED CALIBRATION RANGE UPPER LIMIT.

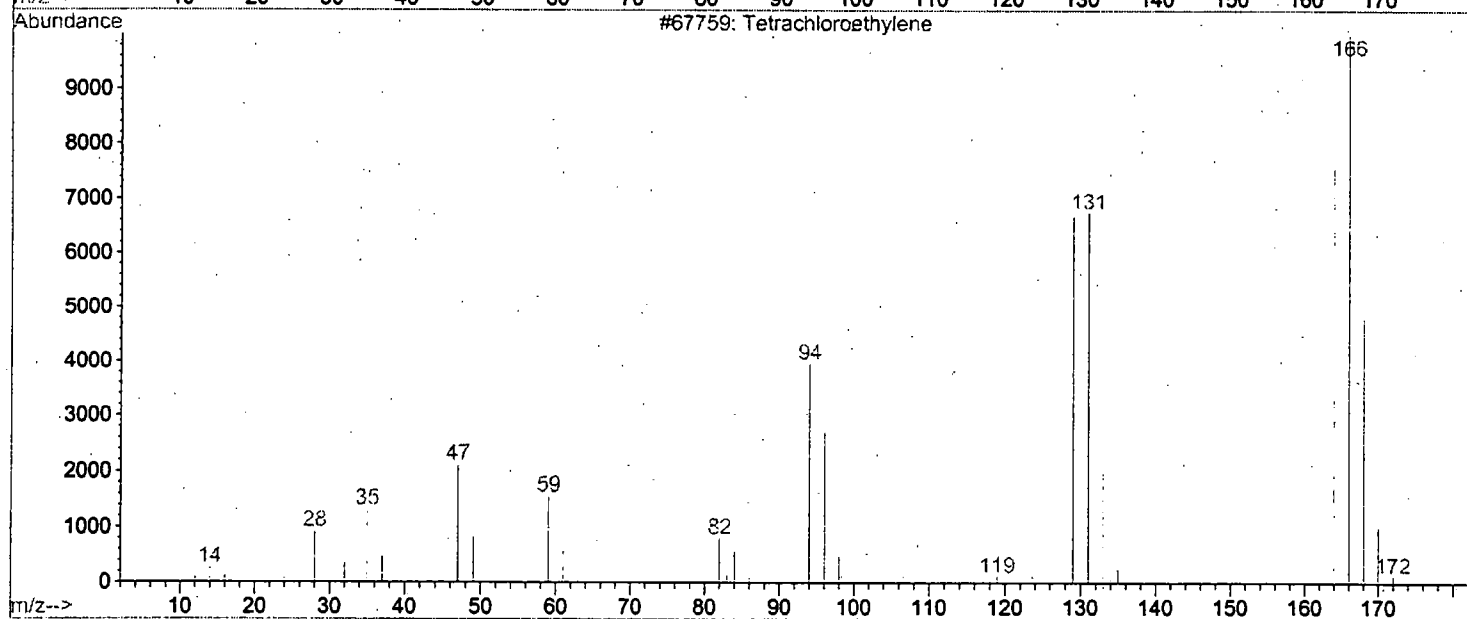
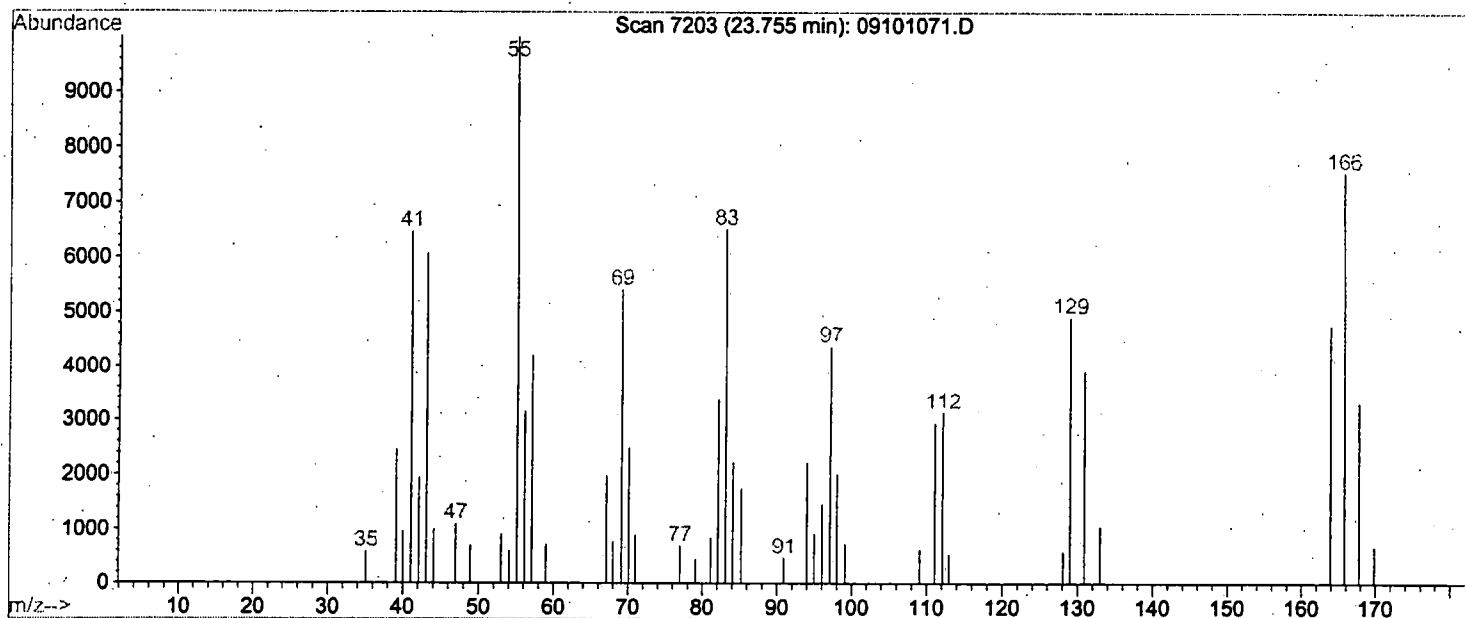
USE INDIVIDUAL RESULTS FROM DILUTED SAMPLES WHEN AVAILABLE.

Jones, R. P., and Clarke, J. U. (2005). "Analytical chemistry detection limits and the evaluation of dredged sediment," ERDC/TN EEDP-04-36, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

File : C:\HPCHEM\1\DATA\VAUXHA-1.09\09101071.D
Operator : CLAKIN
Acquired : 10 Sep 10 8:48 pm using AcqMethod VOL5973
Instrument : Instrumen
Sample Name: SB-5B
Misc Info : VAUXHALL RD & SWANSTROM PL / A605590P
Vial Number: 21



Library Searched : C:\DATABASE\NBS75K.L
Quality : 96
ID : Tetrachloroethylene



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\VAUXHA-1.09\09101071.D Vial: 21
Acq On : 10 Sep 10 8:48 pm Operator: CLAKIN
Sample : SB-5B Inst : Instrumen
Misc : VAUXHALL RD & SWANSTROM PL / A605590P Multiplr: 0.27
MS Integration Params: RTEINT.P
Quant Method : C:\HPCHEM\1\METHODS\VOL5973.M (RTE Integrator)
Title : NJDEP MOBILE LABORATORY
Library : C:\DATABASE\NBS75K.L

Peak Number 1 Cyclohexane, propyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.	
28.57	0.48 PPM	3809680	fluorobenzene	16.67	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, propyl-	126	C9H18	001678-92-8	55
2	Cyclopentane, 1-methyl-2-propyl-	126	C9H18	003728-57-2	50
3	Cyclohexane, propyl-	126	C9H18	001678-92-8	49
4	Cyclohexanone, 2,3-dimethyl-	126	C8H14O	013395-76-1	46
5	Cyclohexane, propyl-	126	C9H18	001678-92-8	43

Peak Number 2 Decane, 4-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.	
31.25	0.70 PPM	5549140	fluorobenzene	16.67	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Decane, 4-methyl-	156	C11H24	002847-72-5	87
2	Decane, 4-methyl-	156	C11H24	002847-72-5	78
3	Decane, 4-methyl-	156	C11H24	002847-72-5	78
4	Heptane, 3,3,5-trimethyl-	142	C10H22	007154-80-5	72
5	Octane, 3,3-dimethyl-	142	C10H22	004110-44-5	64

Peak Number 3 Benzene, 1-methyl-4-(1-methyle Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.	
37.50	0.79 PPM	6190520	fluorobenzene	16.67	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	60
2	Benzene, methyl(1-methylethyl)-	134	C10H14	025155-15-1	60
3	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	60
4	Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	60
5	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	60

 Peak Number 4 Cyclohexane, pentyl- Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
37.60	0.61 PPM	4818530	fluorobenzene	16.67
Hit# of	5	Tentative ID	MW MolForm	CAS# Qual
1		Cyclohexane, pentyl-	154 C11H22	004292-92-6 87
2		n-Amylcyclohexane	154 C11H22	029949-27-7 83
3		Cyclohexane, pentyl-	154 C11H22	004292-92-6 83
4		Cyclohexane, hexyl-	168 C12H24	004292-75-5 62
5		Cyclohexane, (4-methylpentyl)-	168 C12H24	061142-20-9 58

 Peak Number 5 Naphthalene, decahydro-2-methy Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
37.73	0.82 PPM	6471280	fluorobenzene	16.67
Hit# of	5	Tentative ID	MW MolForm	CAS# Qual
1		Naphthalene, decahydro-2-methyl-	152 C11H20	002958-76-1 87
2		Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152 C10H16O	000464-48-2 70
3		Cyclohexanone, 5-methyl-2-(1-methyl	152 C10H16O	015932-80-6 64
4		3-Octyne, 2,2,7-trimethyl-	152 C11H20	055402-13-6 38
5		Pulegone	152 C10H16O	000089-82-7 38

 Peak Number 6 Naphthalene, decahydro-2-methy Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
38.42	0.70 PPM	5495080	fluorobenzene	16.67
Hit# of	5	Tentative ID	MW MolForm	CAS# Qual
1		Naphthalene, decahydro-2-methyl-	152 C11H20	002958-76-1 58
2		Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152 C10H16O	000464-48-2 58
3		Bicyclo[4.1.0]heptan-2-one, 3,5,5-t	152 C10H16O	029750-24-1 58
4		1,4-Pentadiene, 3-propyl-	110 C8H14	000996-83-8 49
5		Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152 C10H16O	000464-48-2 49

 Peak Number 7 Benzene, 1,3-diethyl-5-methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
38.97	0.51 PPM	4033220	fluorobenzene	16.67
Hit# of	5	Tentative ID	MW MolForm	CAS# Qual
1		Benzene, 1,3-diethyl-5-methyl-	148 C11H16	002050-24-0 32
2		Benzene, 1-ethyl-2,3-dimethyl-	134 C10H14	000933-98-2 27
3		Benzene, 4-ethyl-1,2-dimethyl-	134 C10H14	000934-80-5 27
4		Benzene, (1-methylbutyl)-	148 C11H16	002719-52-0 27
5		2,8-Decadiyne	134 C10H14	004116-93-2 25

 Peak Number 8 1H-Indene, 2,3-dihydro-1,3-dim Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.	
39.13	0.49 PPM	3884810	fluorobenzene	16.67	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 2,3-dihydro-1,3-dimethyl	146	C11H14	004175-53-5	47
2	Benzene, (1,1-dimethyl-2-propenyl)-	146	C11H14	018321-36-3	38
3	1H-Indene, 2,3-dihydro-1,2-dimethyl	146	C11H14	017057-82-8	35
4	1H-Indene, 2,3-dihydro-1,6-dimethyl	146	C11H14	017059-48-2	20
5	Naphthalene, 1,2,3,4-tetrahydro-1-m	146	C11H14	001559-81-5	18

 Peak Number 9 Indan, 1-methyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.	
39.91	0.66 PPM	5206670	fluorobenzene	16.67	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	60
2	2,3-Dihydro-1-methylindene	132	C10H12	027133-93-3	60
3	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	58
4	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	58
5	Indan, 1-methyl-	132	C10H12	000767-58-8	58

 Peak Number 10 Cyclohexane, hexyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.	
40.38	0.61 PPM	4838080	fluorobenzene	16.67	
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, hexyl-	168	C12H24	004292-75-5	68
2	Cyclohexane, butyl-	140	C10H20	001678-93-9	58
3	Cyclohexane, octyl-	196	C14H28	001795-15-9	58
4	n-Amylcyclohexane	154	C11H22	029949-27-7	53
5	Cyclohexane, octyl-	196	C14H28	001795-15-9	53

09101071.D VOL5973.M Thu Sep 16 09:40:38 2010

SYSTEM PERFORMANCE REPORTS

SOIL SAMPLE LOG - DRY WEIGHT CALCULATION

CALIBRATION STANDARDS

METHOD BLANKS

MEOH BLANKS

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
MOBILE ENVIRONMENTAL LABORATORY
WINDSOR INDUSTRIAL PARK, BLDG. 18F
WINDSOR, NJ 08561

SITE NAME: Vauxhall Road and Swanstrom Place
LOCATION: Union Township, Union County, NJ

JOB NUMBER: A605590P
DATE RECEIVED: 1 Sept 2010

SOIL SAMPLE LOG - DRY WEIGHT CALCULATION

SAMP #	BAR CODE	SAMPLE ID	SOIL SAMP/VIAL ("As Received")			PAN (G)	WET (G)	DRY (G)	% SOIL	DRY SAMP WT (G)
			INIT WT (G)	FINAL WT (G)	NET (G)					
1	N/A	SB-5A	48.7	65.8	17.1	1.6	23.1	20.6	88.4	15.1
2	N/A	SB-5B	48.7	66.0	17.3	1.6	24.8	21.6	86.2	14.9

14/6

NJDEP MOBILE LABORATORY ANALYTICAL RESULTS REPORT

LAB METHOD 524: Measurement Of Purgeable VOCs In Water By Capillary Column GC/MS

Site Name: Vauxhall Rd. & Swanstrom Pl.

Field Sample Name: 524 30 mtbe 60

Date Received: 9/1/10

Lab Data File Name: 09101064.D

Date Analyzed: 09/10/10 13:38

Sample Matrix: Aqueous Dilution=1/ 1

ID: AGILENT TECHNOLOGIES,5973N,0,3.01.57

GC Column: VOCOL 60m, .25mm ID, 1.5um film

#	Compound Name	Concentration	*	Ret Time	Quantitation	Quant	Qual	MRL
		PPB		Minutes	Response	m/z	m/z	
1)	fluorobenzene	20.00	*ISTD	16.68	1.76E+07	96.00	69.95	0.4
2)	dichlorodifluoromethane	30.00		5.02	2.91E+06	85.05	87.05	0.4
3)	chloromethane	30.00		5.58	2.79E+06	50.00	52.00	0.4
4)	vinyl chloride	30.00		5.87	3.35E+06	62.05	64.05	0.4
5)	bromomethane	30.00		6.90	3.17E+06	94.05	96.05	0.4
6)	chloroethane	30.00		7.03	3.17E+06	64.05	66.05	0.4
7)	trichlorofluoromethane	30.00		7.59	6.40E+06	100.95	102.95	0.4
8)	1,1 dichloroethene	30.00		9.01	5.89E+06	61.00	95.95	0.4
9)	methylene chloride	30.00		10.18	4.39E+06	83.95	49.00	0.4
10)	trans-1,2-dichloroethene	30.00		10.85	5.35E+06	95.95	61.00	0.4
11)	1,1 dichloroethane	30.00		11.92	8.00E+06	63.00	65.00	0.4
12)	2,2 dichloropropane	30.00		13.33	6.25E+06	77.00	96.95	0.4
13)	cis-1,2-dichloroethene	30.00		13.49	5.46E+06	95.95	97.95	0.4
14)	chloroform	30.00		13.88	8.17E+06	82.95	84.95	0.4
15)	bromochloromethane	30.00		14.40	1.95E+06	127.95	129.95	0.4
16)	1,1,1 trichloroethane	30.00		14.94	7.03E+06	96.95	99.00	0.4
17)	1,1 dichloropropene	30.00		15.33	6.36E+06	75.00	109.95	0.4
18)	carbon tetrachloride	30.00		15.65	6.73E+06	116.95	118.95	0.4
19)	benzene	30.00		16.15	2.02E+07	78.00	77.00	0.4
20)	1,2 dichloroethane	30.00		16.11	3.73E+06	62.00	98.05	0.4
21)	trichloroethene	30.00		17.81	6.02E+06	130.00	95.00	0.4
22)	1,2 dichloropropane	30.00		18.36	4.10E+06	63.00	76.00	0.4
23)	bromodichloromethane	30.00		19.10	4.93E+06	82.95	84.95	0.4
24)	dibromomethane	30.00		19.33	1.61E+06	93.00	95.00	0.4
25)	cis-1,3-dichloropropene	30.00		20.68	5.83E+06	75.00	109.95	0.4
26)	toluene	30.00		21.68	1.33E+07	92.00	91.00	0.4
27)	trans-1,3-dichloropropene	30.00		22.24	4.45E+06	75.00	109.95	0.4
28)	1,1,2 trichloroethane	30.00		22.78	2.06E+06	83.00	85.00	0.4
29)	1,3 dichloropropane	30.00		23.61	4.41E+06	76.00	78.00	0.4
30)	tetrachloroethene	30.00		23.76	6.69E+06	165.90	128.95	0.4
31)	dibromochloromethane	30.00		24.58	2.99E+06	129.00	127.00	0.4
32)	1,2 dibromoethane	30.00		25.25	2.06E+06	106.95	108.95	0.4
33)	ethylbenzene	30.00		26.68	9.00E+06	106.00	91.00	0.4
34)	chlorobenzene	30.00		26.58	1.45E+07	112.05	77.00	0.4
35)	1,1,1,2 tetrachloroethane	30.00		26.70	5.16E+06	130.95	132.95	0.4
36)	m,p-xylene	60.00		26.92	2.15E+07	106.15	91.05	0.4
37)	o-xylene	30.00		28.47	1.03E+07	106.15	91.15	0.4

#	Compound Name	Concentration	*	Ret Time	Quantitation	Quant	Qual	SMC	
		PPB		Minutes	Response	m/z	m/z	MRL	%Recov
38)	styrene	30.00		28.62	1.59E+07	104.05	78.10	0.4	
39)	isopropylbenzene	30.00		29.68	7.97E+06	120.00	105.00	0.4	
40)	bromoform	30.00		29.98	1.77E+06	172.90	174.90	0.4	
41)	1,1,2,2 tetrachloroethane	30.00		30.41	2.64E+06	82.95	84.95	0.4	
42)	4-bromofluorobenzene	20.00	*SMC	30.68	5.98E+06	95.00	173.95	0.4	100.0
43)	1,2,3 trichloropropane	30.00		30.95	8.31E+05	110.00	112.00	2.0	
44)	n-propylbenzene	30.00		31.12	8.52E+06	120.00	91.00	0.4	
45)	bromobenzene	30.00		31.43	6.35E+06	155.95	157.95	0.4	
46)	1,3,5 trimethylbenzene	30.00		31.67	1.29E+07	120.00	105.00	0.4	
47)	2-chlorotoluene	30.00		31.85	1.89E+07	91.05	126.05	0.4	
48)	4-chlorotoluene	30.00		32.00	1.90E+07	91.15	126.05	0.4	
49)	tert-butylbenzene	30.00		32.97	2.17E+07	119.15	91.15	0.4	
50)	1,2,4 trimethylbenzene	30.00		33.12	1.21E+07	120.00	105.00	0.4	
51)	sec-butylbenzene	30.00		33.73	7.00E+06	134.00	105.00	0.4	
52)	4-isopropyltoluene	30.00		34.22	8.25E+06	134.00	119.00	0.4	
53)	1,3 dichlorobenzene	30.00		34.70	1.42E+07	145.95	147.95	0.4	
54)	1,4 dichlorobenzene	30.00		35.10	1.39E+07	145.95	147.95	0.4	
55)	n-butylbenzene	30.00		35.74	7.91E+06	134.00	91.00	0.4	
56)	1,2-dichlorobenzene-d4	20.00	*SMC	36.38	6.88E+06	151.90	149.90	0.4	100.0
57)	1,2 dichlorobenzene	30.00		36.49	1.21E+07	145.95	147.95	0.4	
58)	1,2-dibromo-3-chloropropane	30.00		38.86	3.39E+05	75.00	154.95	2.0	
59)	1,2,4 trichlorobenzene	30.00		40.95	8.96E+06	180.00	182.00	0.4	
60)	hexachlorobutadiene	30.00		41.23	6.20E+06	224.90	226.90	0.4	
61)	naphthalene	30.00		41.68	9.43E+06	128.05	0.00	1.0	
62)	1,2,3 trichlorobenzene	30.00		42.29	6.52E+06	180.00	182.00	1.0	
63)	MTBE	60.00		10.39	1.55E+07	73.10	57.05	2.0	

GC/MS Operator

CLAKIN

Mobile Laboratory Manager

* LEGEND:

"J" = <MRL (METHOD REPORTING LIMIT)

"ND" = NOT DETECTED

"B" = DETECTED IN BOTH SAMPLE & TRIP BLANK

"ISTD" = INTERNAL STANDARD

"SMC" = SYSTEM MONITORING COMPOUND

"E" = CONCENTRATION OF SPECIFIC COMPOUND EXCEEDED CALIBRATION RANGE UPPER LIMIT.

USE INDIVIDUAL RESULTS FROM DILUTED SAMPLES WHEN AVAILABLE.

Jones, R. P., and Clarke, J. U. (2005). "Analytical chemistry detection limits and the evaluation of dredged sediment," ERDC/TN EEDP-04-36, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

NJDEP MOBILE LABORATORY ANALYTICAL RESULTS REPORT

LAB METHOD 524: Measurement Of Purgeable VOCs In Water By Capillary Column GC/MS

Site Name: Vauxhall Rd. & Swanstrom Pl.

Field Sample Name: METHOD BLK

Date Received: 9/1/10

Lab Data File Name: 09101066.D

Date Analyzed: 09/10/10 15:33

Sample Matrix: Aqueous Dilution=1/ 1

ID: AGILENT TECHNOLOGIES,5973N,0,3,01.57

GC Column: VOCOL 60m, .25mm ID, 1.5um film

#	Compound Name	Concentration	*	Ret Time	Quantitation	Quant	Qual	MRL
		PPB		Minutes	Response	m/z	m/z	
1)	fluorobenzene	20.00	*ISTD	16.68	1.79E+07	96.00	69.95	0.4
2)	dichlorodifluoromethane	ND				85.05	87.05	0.4
3)	chloromethane	ND				50.00	52.00	0.4
4)	vinyl chloride	ND				62.05	64.05	0.4
5)	bromomethane	ND				94.05	96.05	0.4
6)	chloroethane	ND				64.05	66.05	0.4
7)	trichlorofluoromethane	ND				100.95	102.95	0.4
8)	1,1 dichloroethene	ND				61.00	95.95	0.4
9)	methylene chloride	ND				83.95	49.00	0.4
10)	trans-1,2-dichloroethene	ND				95.95	61.00	0.4
11)	1,1 dichloroethane	ND				63.00	65.00	0.4
12)	2,2 dichloropropane	ND				77.00	96.95	0.4
13)	cis-1,2-dichloroethene	ND				95.95	97.95	0.4
14)	chloroform	ND				82.95	84.95	0.4
15)	bromochloromethane	ND				127.95	129.95	0.4
16)	1,1,1 trichloroethane	ND				96.95	99.00	0.4
17)	1,1 dichloropropene	ND				75.00	109.95	0.4
18)	carbon tetrachloride	ND				116.95	118.95	0.4
19)	benzene	ND				78.00	77.00	0.4
20)	1,2 dichloroethane	ND				62.00	98.05	0.4
21)	trichloroethene	ND				130.00	95.00	0.4
22)	1,2 dichloropropane	ND				63.00	76.00	0.4
23)	bromodichloromethane	ND				82.95	84.95	0.4
24)	dibromomethane	ND				93.00	95.00	0.4
25)	cis-1,3-dichloropropene	ND				75.00	109.95	0.4
26)	toluene	ND				92.00	91.00	0.4
27)	trans-1,3-dichloropropene	ND				75.00	109.95	0.4
28)	1,1,2 trichloroethane	ND				83.00	85.00	0.4
29)	1,3 dichloropropane	ND				76.00	78.00	0.4
30)	tetrachloroethene	ND				165.90	128.95	0.4
31)	dibromochloromethane	ND				129.00	127.00	0.4
32)	1,2 dibromoethane	ND				106.95	108.95	0.4
33)	ethylbenzene	ND				106.00	91.00	0.4
34)	chlorobenzene	ND				112.05	77.00	0.4
35)	1,1,1,2 tetrachloroethane	ND				130.95	132.95	0.4
36)	m,p-xylene	ND				106.15	91.05	0.4
37)	o-xylene	ND				106.15	91.15	0.4

#	Compound Name	Concentration	*	Ret Time	Quantitation	Quant	Qual	SMC	
		PPB		Minutes	Response	m/z	m/z	MRL	%Recov
38)	styrene	ND				104.05	78.10	0.4	
39)	isopropylbenzene	ND				120.00	105.00	0.4	
40)	bromoform	ND				172.90	174.90	0.4	
41)	1,1,2,2 tetrachloroethane	ND				82.95	84.95	0.4	
42)	4-bromofluorobenzene	17.73	*SMC	30.68	5.39E+06	95.00	173.95	0.4	88.6
43)	1,2,3 trichloropropane	ND				110.00	112.00	2.0	
44)	n-propylbenzene	ND				120.00	91.00	0.4	
45)	bromobenzene	ND				155.95	157.95	0.4	
46)	1,3,5 trimethylbenzene	ND				120.00	105.00	0.4	
47)	2-chlorotoluene	ND				91.05	126.05	0.4	
48)	4-chlorotoluene	ND				91.15	126.05	0.4	
49)	tert-butylbenzene	ND				119.15	91.15	0.4	
50)	1,2,4 trimethylbenzene	ND				120.00	105.00	0.4	
51)	sec-butylbenzene	ND				134.00	105.00	0.4	
52)	4-isopropyltoluene	ND				134.00	119.00	0.4	
53)	1,3 dichlorobenzene	ND				145.95	147.95	0.4	
54)	1,4 dichlorobenzene	ND				145.95	147.95	0.4	
55)	n-butylbenzene	ND				134.00	91.00	0.4	
56)	1,2-dichlorobenzene-d4	16.30	*SMC	36.38	5.70E+06	151.90	149.90	0.4	81.5
57)	1,2 dichlorobenzene	ND				145.95	147.95	0.4	
58)	1,2-dibromo-3-chloropropane	ND				75.00	154.95	2.0	
59)	1,2,4 trichlorobenzene	ND				180.00	182.00	0.4	
60)	hexachlorobutadiene	ND				224.90	226.90	0.4	
61)	naphthalene	ND				128.05	0.00	1.0	
62)	1,2,3 trichlorobenzene	ND				180.00	182.00	1.0	
63)	MTBE	ND				73.10	57.05	2.0	

GC/MS Operator

CLAKIN

Mobile Laboratory Manager

* LEGEND:

"J" = <MRL (METHOD REPORTING LIMIT)

"ND" = NOT DETECTED

"B" = DETECTED IN BOTH SAMPLE & TRIP BLANK

"ISTD" = INTERNAL STANDARD

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USE INDIVIDUAL RESULTS FROM DILUTED SAMPLES WHEN AVAILABLE.

Jones, R. P., and Clarke, J. U. (2005). "Analytical chemistry detection limits and the evaluation of dredged sediment," ERDC/TN EEDP-04-36, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\VAUXHA-1.09\09101066.D Vial: 16
Acq On : 10 Sep 10 3:33 pm Operator: CLAKIN
Sample : METHOD BLK Inst : Instrumen
Misc : VAUXHALL RD & SWANSTROM PL / A605590P Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Method : C:\HPCHEM\1\METHODS\VOL5973.M (RTE Integrator)
Title : NJDEP MOBILE LABORATORY
Library : C:\DATABASE\NBS75K.L

No Library Search Compounds Detected

09101066.D VOL5973.M Wed Sep 15 13:20:30 2010

NJDEP MOBILE LABORATORY ANALYTICAL RESULTS REPORT

LAB METHOD 524: Measurement Of Purgeable VOCs In Water By Capillary Column GC/MS

Site Name: Vauxhall Rd. & Swanstrom Pl.

Field Sample Name: MEOH BLK

Date Received: 9/1/10

Lab Data File Name: 09101067.D

Date Analyzed: 09/10/10 16:59

Sample Matrix: Aqueous Dilution=1/ 1

ID: AGILENT TECHNOLOGIES.5973N.0.3.01.57

GC Column: VOCOL 60m, .25mm ID, 1.5um film

#	Compound Name	Concentration	*	Ret Time	Quantitation	Quant	Qual	MRL
		PPB		Minutes	Response	m/z	m/z	
1)	fluorobenzene	20.00	*ISTD	16.67	1.73E+07	96.00	69.95	0.4
2)	dichlorodifluoromethane	ND				85.05	87.05	0.4
3)	chloromethane	ND				50.00	52.00	0.4
4)	vinyl chloride	ND				62.05	64.05	0.4
5)	bromomethane	ND				94.05	96.05	0.4
6)	chloroethane	ND				64.05	66.05	0.4
7)	trichlorofluoromethane	ND				100.95	102.95	0.4
8)	1,1 dichloroethene	ND				61.00	95.95	0.4
9)	methylene chloride	ND				83.95	49.00	0.4
10)	trans-1,2-dichloroethene	ND				95.95	61.00	0.4
11)	1,1 dichloroethane	ND				63.00	65.00	0.4
12)	2,2 dichloropropane	ND				77.00	96.95	0.4
13)	cis-1,2-dichloroethene	ND				95.95	97.95	0.4
14)	chloroform	ND				82.95	84.95	0.4
15)	bromochloromethane	ND				127.95	129.95	0.4
16)	1,1,1 trichloroethane	ND				96.95	99.00	0.4
17)	1,1 dichloropropene	ND				75.00	109.95	0.4
18)	carbon tetrachloride	ND				116.95	118.95	0.4
19)	benzene	ND				78.00	77.00	0.4
20)	1,2 dichloroethane	ND				62.00	98.05	0.4
21)	trichloroethene	ND				130.00	95.00	0.4
22)	1,2 dichloropropane	ND				63.00	76.00	0.4
23)	bromodichloromethane	ND				82.95	84.95	0.4
24)	dibromomethane	ND				93.00	95.00	0.4
25)	cis-1,3-dichloropropene	ND				75.00	109.95	0.4
26)	toluene	ND				92.00	91.00	0.4
27)	trans-1,3-dichloropropene	ND				75.00	109.95	0.4
28)	1,1,2 trichloroethane	ND				83.00	85.00	0.4
29)	1,3 dichloropropane	ND				76.00	78.00	0.4
30)	tetrachloroethene	ND				165.90	128.95	0.4
31)	dibromochloromethane	ND				129.00	127.00	0.4
32)	1,2 dibromoethane	ND				106.95	108.95	0.4
33)	ethylbenzene	ND				106.00	91.00	0.4
34)	chlorobenzene	ND				112.05	77.00	0.4
35)	1,1,1,2 tetrachloroethane	ND				130.95	132.95	0.4
36)	m,p-xylene	ND				106.15	91.05	0.4
37)	o-xylene	ND				106.15	91.15	0.4

#	Compound Name	Concentration	*	Ret Time	Quantitation	Quant	Qual	SMC	
		PPB		Minutes	Response	m/z	m/z	MRL	%Recov
38)	styrene	ND				104.05	78.10	0.4	
39)	isopropylbenzene	ND				120.00	105.00	0.4	
40)	bromoform	ND				172.90	174.90	0.4	
41)	1,1,2,2 tetrachloroethane	ND				82.95	84.95	0.4	
42)	4-bromofluorobenzene	17.26	*SMC	30.68	5.09E+06	95.00	173.95	0.4	86.3
43)	1,2,3 trichloropropane	ND				110.00	112.00	2.0	
44)	n-propylbenzene	ND				120.00	91.00	0.4	
45)	bromobenzene	ND				155.95	157.95	0.4	
46)	1,3,5 trimethylbenzene	ND				120.00	105.00	0.4	
47)	2-chlorotoluene	ND				91.05	126.05	0.4	
48)	4-chlorotoluene	ND				91.15	126.05	0.4	
49)	tert-butylbenzene	ND				119.15	91.15	0.4	
50)	1,2,4 trimethylbenzene	ND				120.00	105.00	0.4	
51)	sec-butylbenzene	ND				134.00	105.00	0.4	
52)	4-isopropyltoluene	ND				134.00	119.00	0.4	
53)	1,3 dichlorobenzene	ND				145.95	147.95	0.4	
54)	1,4 dichlorobenzene	ND				145.95	147.95	0.4	
55)	n-butylbenzene	ND				134.00	91.00	0.4	
56)	1,2-dichlorobenzene-d4	16.04	*SMC	36.38	5.44E+06	151.90	149.90	0.4	80.2
57)	1,2 dichlorobenzene	ND				145.95	147.95	0.4	
58)	1,2-dibromo-3-chloropropane	ND				75.00	154.95	2.0	
59)	1,2,4 trichlorobenzene	ND				180.00	182.00	0.4	
60)	hexachlorobutadiene	ND				224.90	226.90	0.4	
61)	naphthalene	ND				128.05	0.00	1.0	
62)	1,2,3 trichlorobenzene	ND				180.00	182.00	1.0	
63)	MTBE	ND				73.10	57.05	2.0	

GC/MS Operator

CLAKIN

Mobile Laboratory Manager

* LEGEND:

"J" = <MRL (METHOD REPORTING LIMIT)

"ND" = NOT DETECTED

"B" = DETECTED IN BOTH SAMPLE & TRIP BLANK

"ISTD" = INTERNAL STANDARD

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USE INDIVIDUAL RESULTS FROM DILUTED SAMPLES WHEN AVAILABLE.

Jones, R. P., and Clarke, J. U. (2005). "Analytical chemistry detection limits and the evaluation of dredged sediment," ERDC/TN EEDP-04-36, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\VAUXHA~1.09\09101067.D Vial: 17
Acq On : 10 Sep 10 4:59 pm Operator: CLAKIN
Sample : MEOH BLK Inst : Instrumen
Misc : VAUXHALL RD & SWANSTROM PL / A605590P Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Method : C:\HPCHEM\1\METHODS\VOL5973.M (RTE Integrator)
Title : NJDEP MOBILE LABORATORY
Library : C:\DATABASE\NBS75K.L

No Library Search Compounds Detected

09101067.D VOL5973.M Wed Sep 15 13:17:44 2010

Distribution: White - Original (sent with report) Canary - Contractor Snare retain with report file

01/09/09

Date Received: _____

BEMSA LOG # _____

New Jersey Department of Environmental Protection
Site Remediation Program
Bureau of Environmental Measurements and Site Assessment

INTER-DIVISIONAL WORK REQUEST

To: Chief, Bureau of Environmental Measurements and Site Assessment (609/584-4280); Fax (609/584-4298)

I. From:

Name: Steve Hoke Phone # 530-8704 Date of Request: 08/26/10

Bureau: BEMSA - Site Assessment Due Date: Sept 1 is work day

II. Cover Memo attached: ☐ Yes ☒ No ☐ Faxed/Emailed; hard copy to follow

III Scope of Work attached: ☐ Yes ☐ No ☒ Faxed/Emailed; hard copy to follow

IV. Site Information: **Note: all information must be in agreement with NJEMS SRP PI #** 502662

Funding Authorization #: 100 042 4815 406 3610 PA/SI Grant Job Code #: A605590P "V" Code: 6TE

NJEMS Site Name: Vauxhall Road and Swanstrom Place

NJEMS Address: Vauxhall road and Swanstrom Place

County: Union Municipality Union

Site Manager/Case Manager: Steve Hoke Tech.Coordinator: _____

Geologist: _____ Community Relations Rep.: _____

Site Manager Signature: _____ Section Chief Signature: _____

V. Project Phase: (Check one)

☐ RI ☐ RD ☐ RA ☐ Construction O & M ☐ Other: SI

VI. Analysis by: (Check one)

☐ State Contract Lab ☒ Mobile Lab ☐ Field GC ☐ Immunoassay ☐ XRF

☐ HACH ☐ Direct Purchase Authorization

VII. Analytical Parameters: PCE, TCE

VIII. Sampling Information: (Number of)

Monitoring Wells _____ Potable Wells _____ Soil 4 Soil Gas _____ Surface Water _____ Sediments _____ Waste _____

Indoor Air _____ Sub-Slab _____ Passive Diffusion Bag _____ Geoprobe Ground Water 11 Other _____

QC Samples: Field Blank 1 Trip Blank 1 Duplicate _____ Total Number of Samples 17

BEMSA USE ONLY

Supervisor Assigned:

Staff Person:

Date Assigned:

Routine:

High Priority:

Date Due:

Attachment M

Memo: March 21, 2010

From: Steven Hoke

To: Genlyte Stonco File

Re: Obscure compounds detected in soil sample from boring SB-5

Source: Wikipedia

Cumene is the common name for **isopropylbenzene**, an organic compound that is an aromatic hydrocarbon. It is a constituent of crude oil and refined fuels.

n-Propylbenzene occurs naturally in petroleum and bituminous coal. It is released to the atmosphere in emissions from combustion sources such as incinerators, gasoline engines, and diesel engines. Solvent evaporation, landfill leaching, and general use of asphalt also release it to the environment.

Mesitylene or **1,3,5-trimethylbenzene** (C_9H_{12}) is an aromatic hydrocarbon with three methyl substituents attached to the benzene ring. It is prepared by distillation of acetone with sulfuric acid or by trimerization of propyne in sulfuric acid, which, in both cases, acts as a catalyst and dehydrating agent. It is commonly used as a solvent in research and industry. It is flammable and an irritant; it is a low-freezing liquid.

1,2,4-Trimethylbenzene is a colorless liquid with chemical formula C_9H_{12} . It is a flammable aromatic hydrocarbon with a strong odor. It occurs naturally in coal tar and petroleum (about 3%). It is nearly insoluble in water, but well soluble in ethanol, diethyl ether, and benzene. 1,2,4-Trimethylbenzene dissolved in mineral oil is used as a liquid scintillator. It is also used as a sterilizing agent and in the manufacture of dyes, perfumes, and resins. Another major use is as a gasoline additive.^[2]

4-isopropyltoluene or Cymene, or *p*-cymene, is a naturally occurring aromatic organic compound. It is classified as a hydrocarbon related to a monoterpene. Its structure consists of a benzene ring *para*-substituted with a methyl group and an isopropyl group. It is insoluble in water, but miscible with ethanol and ether. Cymene is a constituent of a number of essential oils, most commonly the oil of cumin and thyme. Significant amounts of cymene are formed in sulfite pulping process from the wood terpenes.

Most **naphthalene** is derived from coal tar. From the 1960s until the 1990s, significant amounts of naphthalene were also produced from heavy petroleum fractions during petroleum refining, but today petroleum-derived naphthalene represents only a minor component of naphthalene production.

Attachment N

Table 1
Monitoring Well and Ground Water Elevation Summary
May 23, 2005, October 31, 2007 and December 24, 2007
Former Red Devil Site
Union Township, New Jersey

Monitoring Well No.	PVC Rim Elevation (FT AMSL) NGVD' 29	Well Depth From Surface (Feet bgs)	Screened Interval From Surface (Feet bgs)	Screened Interval Elevation (FT AMSL)	Screen Length (Feet)	Depth to Water (feet) 5/23/2005	Depth to Water (feet) 10/31/2007	Depth to Water (feet) 12/24/2007	Ground Water Elevation (FT AMSL) 5/23/2005	Ground Water Elevation (FT AMSL) 10/31/2007	Ground Water Elevation (FT AMSL) 12/24/2007
SHALLOW											
S-1	120.87	28.63	? to 28.10	? to 92.77	?	21.16	21.21	21.13	99.71	99.66	99.74
1	117.84	30.38	17.32 to 32.32	100.52 to 85.52	15	20.63	21.41	20.89	97.21	96.43	96.95
2	121.36	33.44	20.40 to 35.40	100.96 to 85.96	15	23.94	24.21	23.90	97.42	97.15	97.46
3	122.84	33.26	20.10 to 35.10	102.74 to 87.74	15	25.57	26.40	26.20	97.27	96.44	96.64
4	126.96	36.09	22.75 to 37.75	104.21 to 89.21	15	29.73	30.56	30.43	97.23	96.40	96.53
5	121.22	33.88	19.70 to 34.70	101.52 to 86.52	15	24.07	25.12	24.86	97.15	96.10	96.36
6	117.66	33.94	18.60 to 33.60	99.06 to 84.06	15	21.27	22.76	22.75	96.39	94.90	94.91
7	117.63	31.92	16.35 to 31.35	101.28 to 86.28	15	20.49	21.57	21.26	97.14	96.06	96.37
8	116.53	26.27	10.90 to 25.90	105.63 to 90.63	15	19.45	20.54	20.19	97.08	95.99	96.34
9	117.75	29.85	14.40 to 29.40	103.35 to 88.35	15	20.75	21.66	21.30	97.00	96.09	96.45
10D	117.01	38.79	28.39 to 38.39	88.62 to 78.62	10	20.06	21.36	21.35	96.95	95.65	95.66
11D	121.72	44.23	35.95 to 45.95	85.77 to 75.77	10	24.58	25.79	25.50	97.14	95.93	96.22
12	119.67	30.08	14.55 to 29.55	105.12 to 90.12	15	22.54	23.42	23.13	97.13	96.25	96.54
13	122.83	32.27	17.10 to 32.10	105.73 to 90.73	15	22.94	23.08	23.08	99.89	99.75	99.75
14	125.36	32.89	17.50 to 32.50	107.86 to 92.86	15	25.11	27.75	27.78	100.25	97.61	97.58
17	118.04	34.04	18.88 to 33.88	99.16 to 84.16	15	18.88	18.25	18.68	99.16	99.79	99.36
18	126.24	34.42	19.42 to 34.42	106.82 to 91.82	15	28.83	29.29	29.12	97.41	96.95	97.12
22	122.24	40.51	30.25 to 40.25	91.99 to 81.99	10	25.08	20.08	25.81	97.16	102.16	96.43
23	125.82	40.00	25.00 to 40.00	101.20 to 86.20	15	NI	NI	27.09	NI	NI	98.73
24	127.14	42.00	27.00 to 42.00	100.60 to 85.60	15	NI	NI	30.05	NI	NI	97.09
25	127.24	42.00	27.00 to 42.00	100.70 to 85.70	15	NI	NI	31.32	NI	NI	95.92
TOP OF ROCK											
1D	126.84	66.16	58.60 to 68.60	68.24 to 58.24	10	28.31	29.22	29.02	98.53	97.62	97.82
2D	117.95	58.15	50.05 to 60.05	67.90 to 57.90	10	21.16	22.47	22.32	96.79	95.48	95.63
3D	116.59	58.88	48.57 to 58.57	68.02 to 58.02	10	20.00	21.62	21.33	96.59	94.97	95.26
14D	124.93	57.82	42.35 to 57.35	82.58 to 67.58	15	26.21	26.51	26.42	98.72	98.42	98.51
15D	121.20	58.55	43.37 to 58.37	77.83 to 62.83	15	21.41	20.51	20.89	99.79	100.69	100.31
16D	117.85	57.25	42.10 to 57.10	75.75 to 60.75	15	16.05	16.52	16.13	101.80	101.33	101.72
18D	126.57	57.97	32.74 to 57.74	93.83 to 68.83	25	27.42	27.91	27.94	99.15	98.66	98.83
20D	124.44	49.46	39.30 to 49.30	85.14 to 75.14	10	32.02	29.91	30.02	92.42	94.53	94.42
22D	122.33	67.40	57.23 to 67.23	65.10 to 55.10	10	24.10	25.13	24.92	98.23	97.20	97.41
23D	125.74	66.00	56.00 to 66.00	70.20 to 60.20	10	NI	NI	27.31	NI	NI	98.43
24D	127.22	65.00	55.00 to 65.00	72.60 to 62.60	10	NI	NI	28.66	NI	NI	98.56
25D	127.28	65.00	55.00 to 65.00	72.80 to 62.80	10	NI	NI	30.98	NI	NI	96.30
BEDROCK											
1RX	125.33	120.75	101.78 to 121.78	23.55 to 3.55	20	21.25	22.06	21.46	104.08	103.27	103.87
2RX	118.05	112.75	92.60 to 112.60	25.45 to 5.45	20	22.13	23.10	22.45	95.92	94.95	95.60
3RX	116.71	108.04	87.85 to 107.85	28.86 to 8.86	20	17.48	18.84	18.37	99.23	97.87	98.34
14RX	125.35	109.67	89.37 to 109.37	35.98 to 15.98	20	19.90	20.80	20.61	105.45	104.55	104.74
19BR	124.24	105.43	95.27 to 105.27	28.97 to 18.97	10	28.17	33.06	32.63	96.07	91.18	91.61

Note 1: Water table elevations are reported in feet above mean sea level (ft amsl).

Note 2: Elevations based on NGVD' 29.

Note 3: BGS - Below ground surface

Note 4: NI - Not Installed

MONITORING WELL SPECIFICATIONS

Well Number	NJDEP Permit Number	Well Depth (feet) From Ground Surface	Diameter (Inches) Riser/Screen	Elevation (feet above mean sea level)		
				Ground Surface	Top of Riser	Screened Interval
SHALLOW						
S-1		28.63	2	121.4	120.87	92.77
MW-1	26-19534	30.38	4	115.9	117.84	100.52-85.52
MW-2	26-19542	33.44	4	119.4	121.36	100.96-85.96
MW-3	26-19541	33.26	4	121.0	122.84	102.74-87.74
MW-4	26-19540	36.09	4	125.3	126.96	104.21-89.21
MW-5	26-19539	33.88	4	120.4	121.22	101.52-86.52
MW-6	26-19538	33.94	4	118.0	117.66	99.06-84.06
MW-7	26-19537	31.92	4	118.2	117.63	101.28-86.28
MW-8	26-19536	26.27	4	116.9	116.53	105.63-90.63
MW-9	26-19535	29.85	4	118.2	117.75	103.35-88.35
MW-11D	26-19524	44.23	4	120.0	121.72	85.77-75.77
MW-12	26-21915	30.08	2	120.2	119.67	105.12-90.12
MW-13	26-30069	32.27	2	123.0	122.83	7-90.73
MW-17		34.04	2	118.2	118.04	7-84.16
MW-22	26-66922	40.51	2	122.5	122.24	91.99-81.99
TOP OF ROCK						
MW-1D	26-71422	66.16	2	124.4	126.84	68.24-58.24
MW-2D	26-71424	58.15	2	118.3	118.05	67.9-57.9
MW-3D	26-71426	58.88	2	116.9	116.59	68.02-58.02
MW-14D		57.82	2	125.4	124.93	7-67.58
MW-15D		58.55	2	121.4	121.20	7-62.83
MW-16D		57.25	2	118.0	117.85	7-60.75
MW-18D		57.97	2	126.8	126.57	7-68.83
MW-20D	26-67039	49.46	2	124.6	124.44	85.14-75.14
MW-22D	26-66923	67.40	2	122.5	122.33	65.1-55.1
BEDROCK						
MW-1RX	26-71423	120.75	2	124.3	125.33	23.55-3.55
MW-2RX	26-71425	112.75	2	118.2	117.95	25.45-5.45
MW-3RX	26-71427	108.04	2	116.9	116.71	28.86-8.86
MW-19BR	26-67038	105.43	2	124.4	124.24	28-97-18-97

Ground Water Elevations (feet)
August 30, 2004

MW	PVC RIM ELEVATION NGVD' 29	DEPTH TO WATER	WATER TABLE
SHALLOW			
S-1	120.87	21.22	99.65
1	117.84	20.34	97.5
2	121.36	23.83	97.53
3	122.84	25.42	97.42
4	126.96	29.59	97.37
5	121.22	23.91	97.31
6	117.66	21.14	96.52
7	117.63	23.31	94.32
8	116.53	19.23	97.30
9	117.75	20.44	97.31
11D	121.72	24.45	97.27
12	119.67	22.35	97.32
13	122.83	22.97	99.86
17	118.04	18.83	99.21
22	122.24	24.92	97.32
TOP OF ROCK			
1D	126.84	28.26	98.58
2D	118.05	21.12	96.93
3D	116.59	20.18	96.41
14D	124.93	26.06	98.87
15D	121.20	20.14	101.06
16D	117.85	15.70	102.15
18D	126.57	27.58	98.99
20D	124.44	28.11	96.33
22D	122.33	23.45	98.88
BEDROCK			
1RX	125.33	20.97	104.36
2RX	117.95	22.68	95.27
3RX	116.71	23.35	93.36
19BR	124.24	32.34	91.90

23

TABLE 3
GROUND WATER SAMPLING RESULTS
October/November and December 2007
Deep Overburden Aquifer Wells
Former Red Devil Site
Union Township, New Jersey

SAMPLE ID NUMBER	New Jersey	MW-1D*	MW-1D*	MW-1D*	MW-1D*	MW-2D	MW-2D	MW-2D	MW-2D	MW-3D	MW-3D	MW-3D	MW-3D
SAMPLE DATE	Ground Water	4/19/05	5/23/05	11/07	12/07	4/19/05	5/23/05	11/07	12/07	4/19/05	5/23/05	11/07	12/07
SAMPLE DEPTH (ft)	Quality Criteria	68.60	68.60	32	29	60.15	60.15	26	26	58.57	58.57	25	25
AQUIFER	(ug/L)	deep	deep	deep	deep	deep	deep	deep	deep	deep	deep	deep	deep
VOLATILE COMPOUNDS (ug/L)													
Acetone	700												
Bromomethane	10												
1,1-Dichloroethene	1		3.6	1	1.7	76	120	69	35	40	86	42	28
1,1-Dichloroethane	50									1	1.3	0.8	
cis-1,2-Dichloroethene	70	3.3	2.6	0.7	1.7	5.7	9.6	6.3	4.3	2.2	3.4	2	1.6
1,2-Dichloroethane	2											0.3	
1,1,1-Trichloroethane	30					36	46	39	14	19	28	8.9	7
Trichloroethene	1	460	410	170	270	1,400	1,900	1,400	1,000	95	130	100	77
Tetrachloroethene	1	9	8.3	3.1	4.6	10	18	12	9.9	22	33	27	22
Chloroform	6									0.6	0.6		
MTBE	70							4.2		0.7		0.4	0.3
TICs													

Notes:

NA - Not Analyzed

ND - Not Detected

* - Diluted Sample

+ - Compared to FW2 Surface
Water Quality Standards

TABLE 3
GROUND WATER SAMPLING RESULTS
October/November and December 2007
Deep Overburden Aquifer Wells
Former Red Devil Site
Union Township, New Jersey

SAMPLE ID NUMBER	New Jersey	MW-14D	MW-14D*	MW-14D*	MW-14D*	MW-14D*	MW-15D	MW-15D	MW-15D	MW-15D	MW-15D
SAMPLE DATE	Ground Water	6/21/04	4/19/05	5/23/05	11/07	12/07	6/21/04	4/19/05	5/23/05	11/07	12/07
SAMPLE DEPTH (ft)	Quality Criteria	57.35	57.35	57.35	30	30	58.37	58.37	58.37	28	27
AQUIFER	(ug/L)	deep	deep	deep	deep	deep	deep	deep	deep	deep	deep
VOLATILE COMPOUNDS (ug/L)							ND	ND	ND	ND	ND
Acetone	700										
Bromomethane	10										
1,1-Dichloroethene	1	30	52	51	17	16					
1,1-Dichloroethane	50										
cis-1,2-Dichloroethene	70	1.7			0.7	0.8					
1,2-Dichloroethane	2										
1,1,1-Trichloroethane	30	7.5	9.6	7.7	2.1	3					
Trichloroethene	1	370	450	380	180	250					
Tetrachloroethene	1	1.6			1	1.4					
Chloroform	6										
MTBE	70										
TICs											

Notes:

NA - Not Analyzed

ND - Not Detected

* - Diluted Sample

+ - Compared to FW2 Surface
Water Quality Standards

TABLE 3
GROUND WATER SAMPLING RESULTS
October/November and December 2007
Deep Overburden Aquifer Wells
Former Red Devil Site
Union Township, New Jersey

SAMPLE ID NUMBER	New Jersey	MW-16D	MW-16D	MW-16D	MW-16D	MW-16D	MW-18D	MW-18D	MW-18D	MW-18D	MW-18D
SAMPLE DATE	Ground Water	6/21/04	4/19/05	5/23/05	11/07	12/07	6/21/04	4/19/05	5/23/05	11/07	12/07
SAMPLE DEPTH (ft)	Quality Criteria	57.10	57.10	57.10	32	36	57.74	57.74	57.74	32	31
AQUIFER	(ug/L)	deep	deep	deep	deep	deep	deep	deep	deep	deep	deep
VOLATILE COMPOUNDS (ug/L)		ND	ND	ND		ND					
Acetone	700										
Bromomethane	10				1.1						
1,1-Dichloroethene	1						35	30	40	22	12
1,1-Dichloroethane	50										
cis-1,2-Dichloroethene	70						0.8			0.5	
1,2-Dichloroethane	2										
1,1,1-Trichloroethane	30						18	14	14	6.6	3.8
Trichloroethene	1						200	180	180	120	78
Tetrachloroethene	1						3.3	2.7	3.6	2.3	1.4
Chloroform	6										
MTBE	70										
TICs											

Notes:

NA - Not Analyzed

ND - Not Detected

* - Diluted Sample

+ - Compared to FW2 Surface
Water Quality Standards

TABLE 3
GROUND WATER SAMPLING RESULTS
October/November and December 2007
Deep Overburden Aquifer Wells
Former Red Devil Site
Union Township, New Jersey

SAMPLE ID NUMBER	New Jersey	MW-20D	MW-20D	MW-20D	MW-20D	MW-22D	MW-22D	MW-22D	MW-22D	MW-22D
SAMPLE DATE	Ground Water	4/19/05	5/23/05	11/07	12/07	6/21/04	4/19/05	5/23/05	11/07	12/07
SAMPLE DEPTH (ft)	Quality Criteria	49.30	49.30	34	33	67.23	67.23	67.23	57	57
AQUIFER	(ug/L)	deep	deep	deep	deep	deep	deep	deep	deep	deep
VOLATILE COMPOUNDS (ug/L)										
Acetone	700									
Bromomethane	10									
1,1-Dichloroethene	1		34	18	11			0.5		
1,1-Dichloroethane	50	25	25	14	9.4					
cis-1,2-Dichloroethene	70	12	12	14	11	1.8	1.7	2.2	0.7	1
1,2-Dichloroethane	2									
1,1,1-Trichloroethane	30	96	96	41	30	0.6	1	0.4	0.5	
Trichloroethene	1	1,400	1,700	1,500	1,300	94	88	100	62	56
Tetrachloroethene	1		6.1			10	6.6	9.3	3.9	7.9
Chloroform	6	4.1								
MTBE	70									
TICs										

Notes:

NA - Not Analyzed

ND - Not Detected

* - Diluted Sample

+ - Compared to FW2 Surface
Water Quality Standards

TABLE 3
GROUND WATER SAMPLING RESULTS
October/November and December 2007
Deep Overburden Aquifer Wells
Former Red Devil Site
Union Township, New Jersey

SAMPLE ID NUMBER	New Jersey	MW-23D	MW-24D	MW-25D	FB	FB	FB	FB	FB	TB	TB	TB	TB	TB
SAMPLE DATE	Ground Water	12/07	12/07	12/07	6/21/04	4/19/05	5/23/05	11/07	12/07	6/21/04	4/19/05	5/23/05	11/07	12/07
SAMPLE DEPTH (ft)	Quality Criteria	30	49	37										
AQUIFER	(ug/L)	deep	deep	deep										
VOLATILE COMPOUNDS (ug/L)					ND			ND	ND	ND			ND	ND
Acetone	700						9.6					4.7		
Bromomethane	10													
1,1-Dichloroethene	1	11	72	98										
1,1-Dichloroethane	50													
cis-1,2-Dichloroethene	70		1.2											
1,2-Dichloroethane	2													
1,1,1-Trichloroethane	30		16	20										
Trichloroethene	1	350	240	400										
Tetrachloroethene	1		4.8	6.4										
Chloroform	6													
MTBE	70													
TICs														

Notes:

NA - Not Analyzed

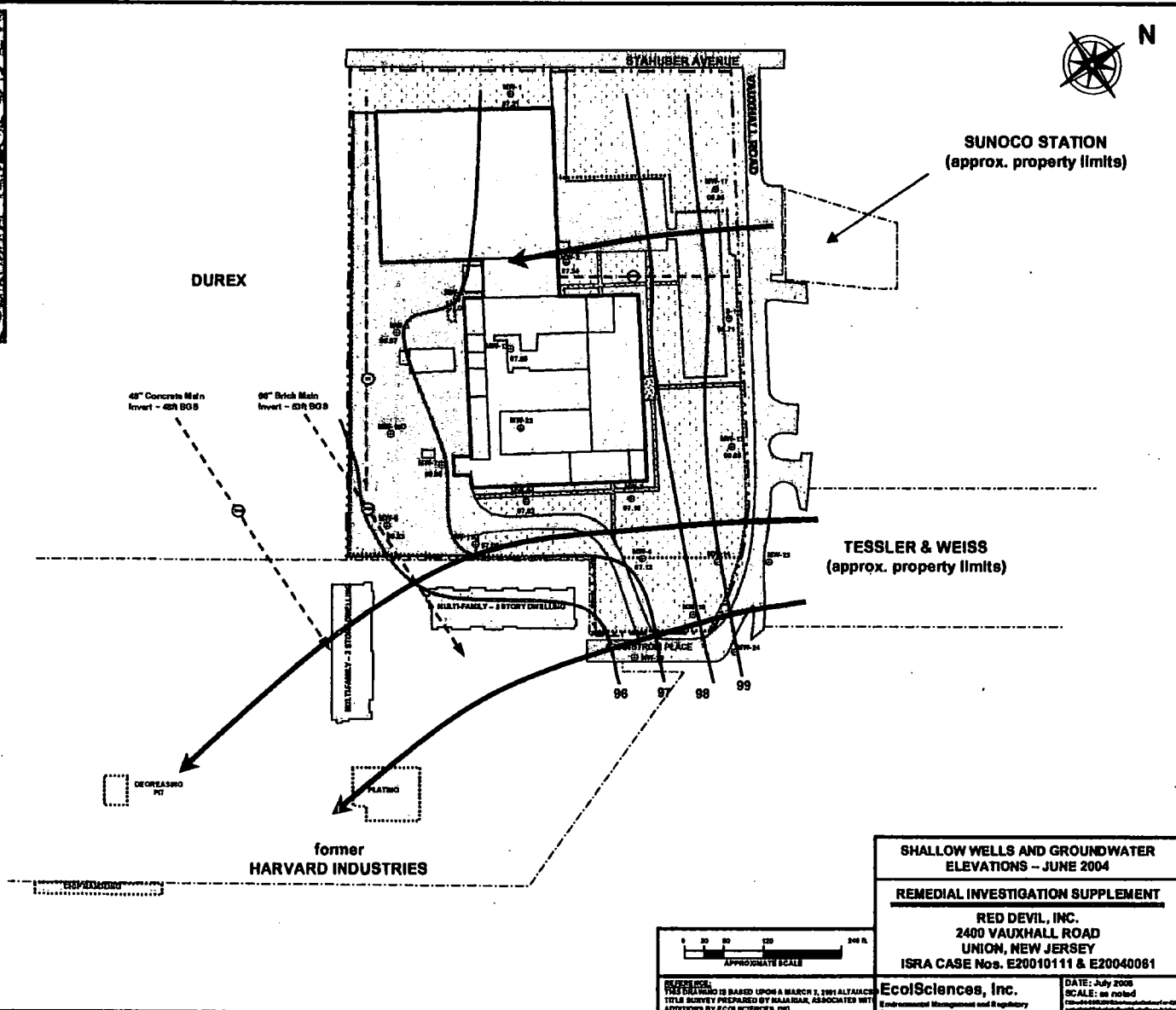
ND - Not Detected

* - Diluted Sample

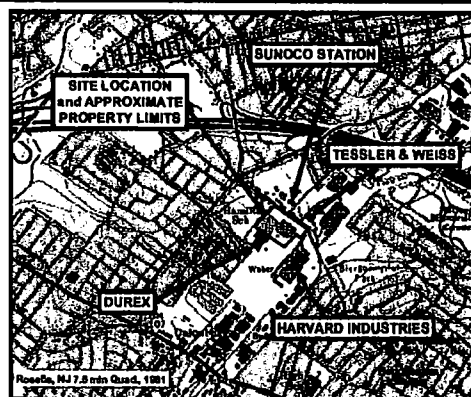
+ - Compared to FW2 Surface
Water Quality Standards



NOTES:
Contours drawn with computer assistance using
Kriging interpolation method with default settings.
Groundwater depth not available for monitoring
wells MW-10D, MW-14, MW-18 and MW-22



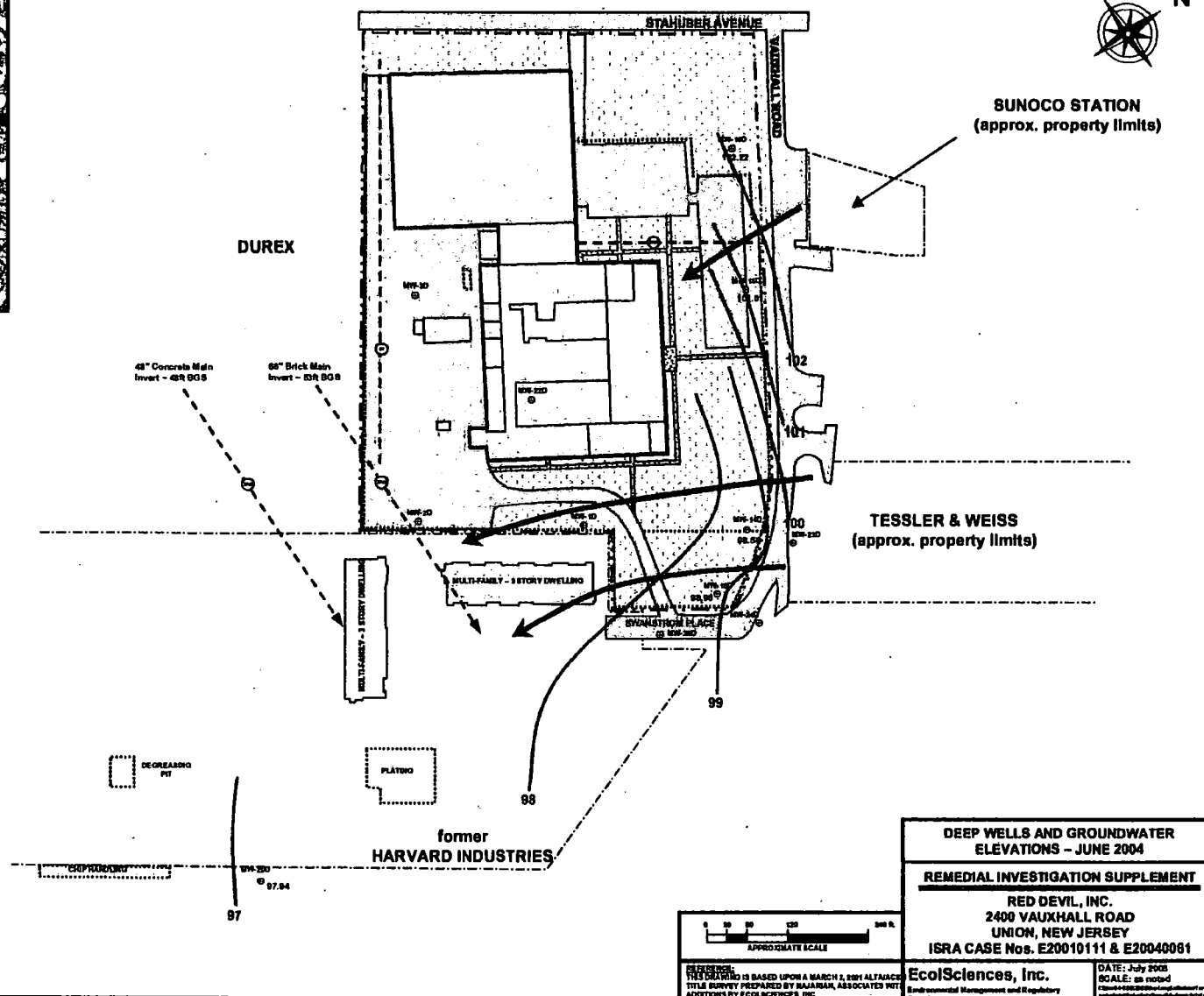
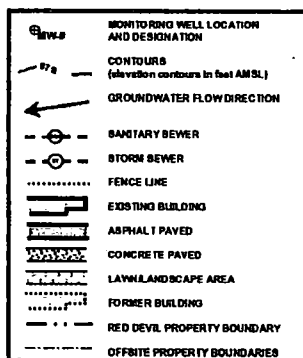
126



**JUNE 2004
DEEP GROUNDWATER ELEVATIONS**

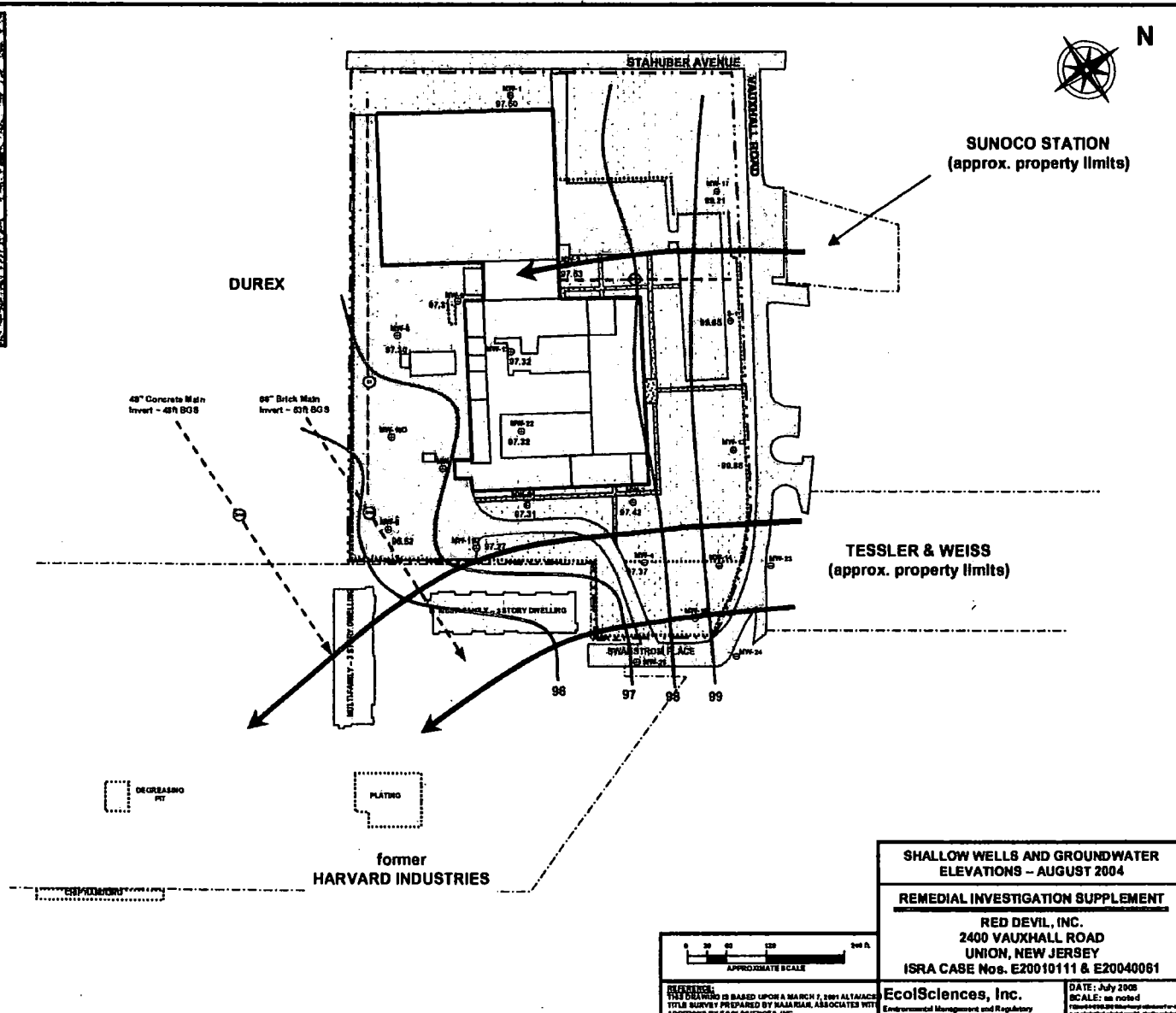
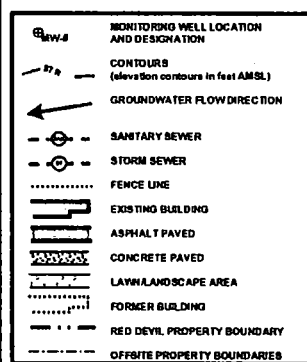
MW-142	88.54 amsl
MW-150	101.01 amsl
MW-150	102.22 amsl
MW-180	98.00 amsl
MW-200	97.84 amsl

NOTES:
Contours drawn with computer assistance using
Kriging Interpolation method with default settings.
Not all deep wells gauged during June 2004. Contours
based on limited number of sampled wells.



AUGUST 2004	
SHALLOW GROUNDWATER ELEVATIONS	
ST	05.05
1	07.50
2	07.53
3	07.43
4	07.37
5	07.31
6	06.52
7	04.32
8	07.30
9	07.31
11D	07.27
12	07.32
13	06.05
17	06.21
22	07.71

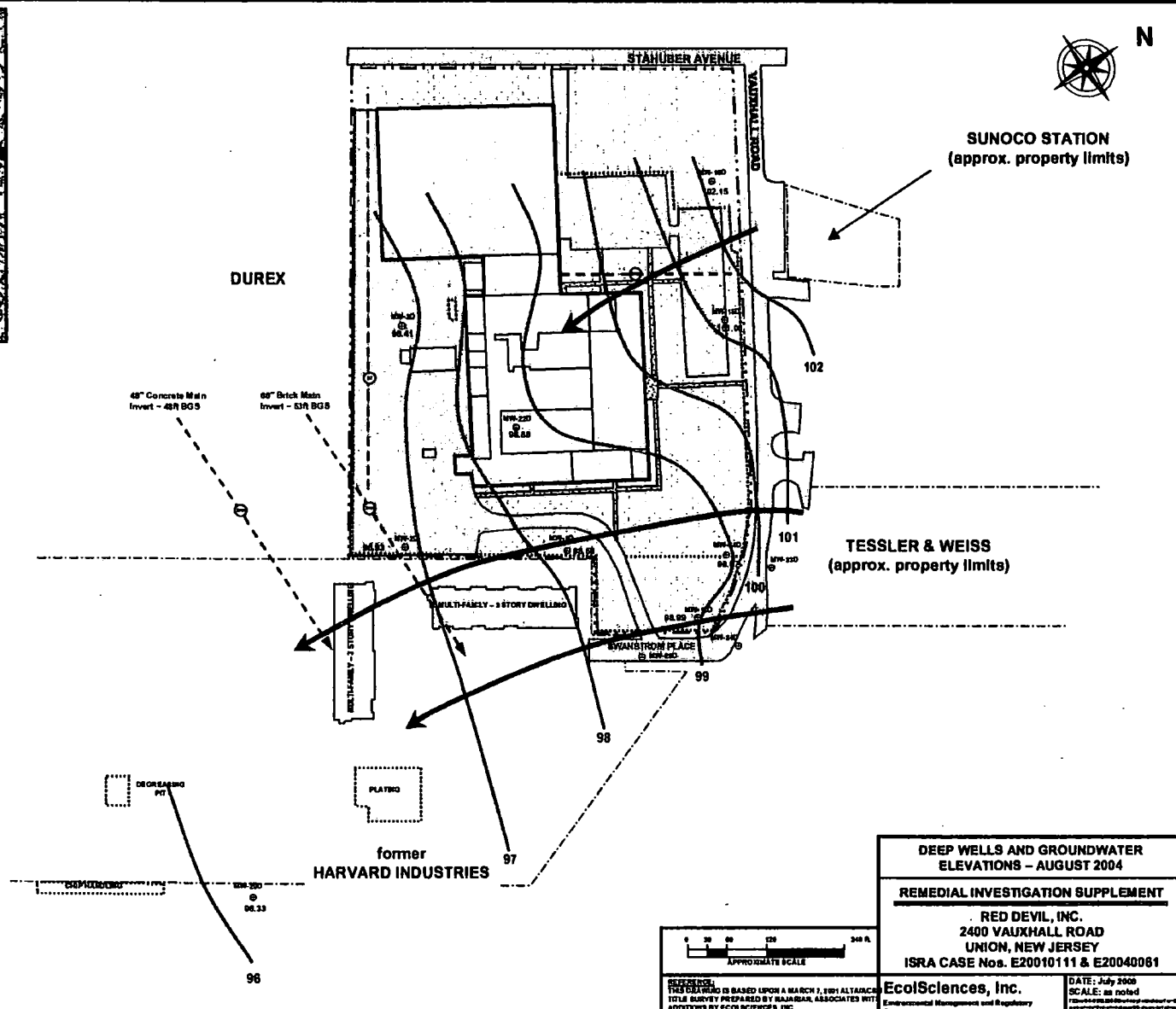
22	97-52
<p>NOTES:</p> <p>Contours drawn with computer assistance using Kriging interpolation method with default settings.</p> <p>Monitoring well MW-7 not used in contouring. Groundwater elevation in MW-7 believed to be due to field error. Elevation lower than previous and subsequent elevation readings and anomalous when compared to surrounding well readings.</p> <p>Groundwater depth not available for monitoring wells MW-100, MW-14 and MW-18.</p>	



AUGUST 2064	
DEEP GROUNDWATER ELEVATIONS	
MAW-10	98.50 amsl
MAW-20	98.53 amsl
MAW-30	98.41 amsl
MAW-14D	98.87 amsl
MAW-150	101.09 amsl
MAW-160	102.16 amsl
MAW-18D	98.50 amsl
MAW-20D	98.33 amsl
MAW-22D	98.66 amsl

NOTES:
 Contours drawn with computer assistance using
 Kriging interpolation method with default settings.

- | | |
|--|---|
| | MONITORING WELL LOCATION AND DESIGNATION |
| | CONTOURS
(elevation contours in feet AMSL) |
| | GROUNDWATER FLOW DIRECTION |
| | SANITARY SEWER |
| | STORM SEWER |
| | FENCE LINE |
| | EXISTING BUILDING |
| | ASPHALT PAVED |
| | CONCRETE PAVED |
| | LAWN/LAND SCAPE AREA |
| | FORMER BUILDING |
| | RED DEVIL PROPERTY BOUNDARY |
| | OFFSITE PROPERTY BOUNDARIES |

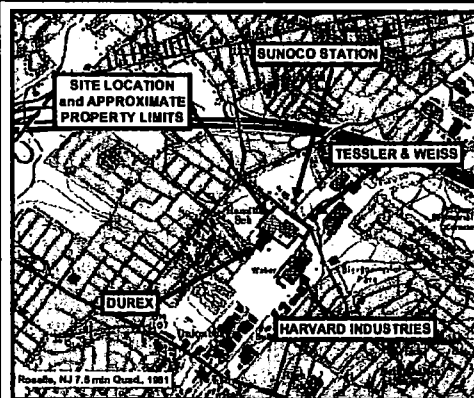




NOTES:
Contours drawn with computer assistance using
Kriging interpolative method with default settings.
Monitoring well MW-14 not used in contouring.
Groundwater elevation in MW-14 believed to be due to
field error. Elevation higher than previous and subsequent
elevation readings and erroneous when compared
to surrounding well readings.

-
- SHALLOW WELLS AND GROUNDWATER ELEVATIONS - APRIL 2005**
- REMEDIAL INVESTIGATION SUPPLEMENT**
- RED DEVIL, INC.**
2400 VAUXHALL ROAD
UNION, NEW JERSEY
ISRA CASE Nos. E20010111 & E20040061
- EcolSciences, Inc.**
Environmental Management and Regulatory
- DATE: July 2008
SCALE: as noted
- THIS DRAWING IS BASED UPON A MARCH 7, 2004 ALTA/ACME TITLE SURVEY PREPARED BY RAJA RANA, ASSOCIATED WITH ENGINEERS BY DESIGN, INC. 2007

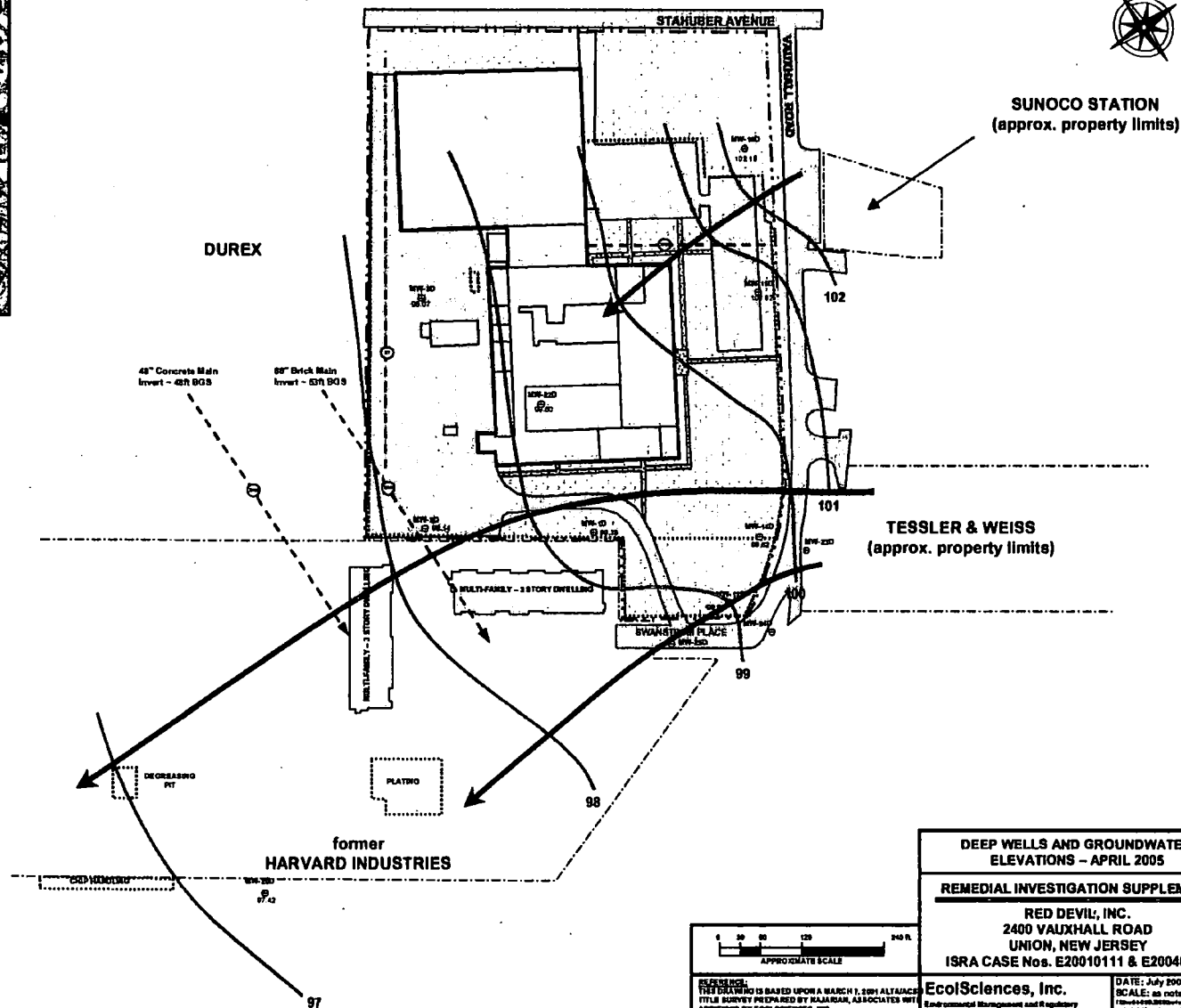
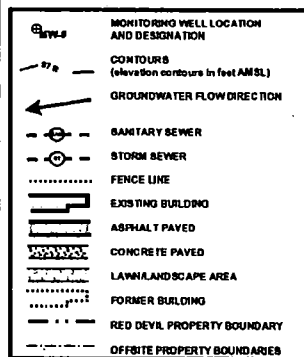
130



APRIL 2005
DEEP GROUNDWATER ELEVATIONS

MW-10	99.78 amsl
MW-20	99.14 amsl
MW-30	98.67 amsl
MW-140	98.62 amsl
MW-150	98.52 amsl
MW-160	98.15 amsl
MW-180	98.00 amsl
MW-200	97.42 amsl
MW-220	96.60 amsl

NOTES:
Contours drawn with computer assistance using
Kriging Interpolative method with default settings.



THIS DRAWING IS BASED UPON A MARCH 1, 2004 ALTAIR TITLE SURVEY PREPARED BY KAJIARIAN, ASSOCIATES INC. ADDITIONS BY ECO SCIENCES, INC.

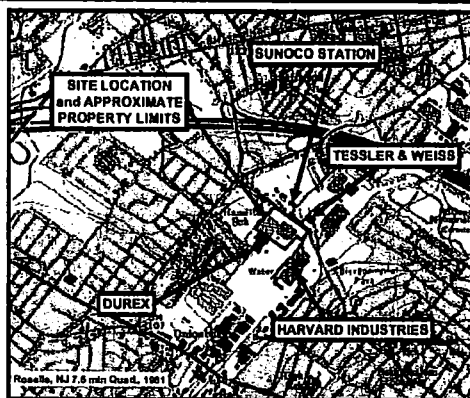
DEEP WELLS AND GROUNDWATER ELEVATIONS - APRIL 2005

REMEDIAL INVESTIGATION SUPPLEMENT

RED DEVIL, INC.
2400 VAUXHALL ROAD
UNION, NEW JERSEY
ISRA CASE Nos. E20010111 & E20040061

EcoSciences, Inc.
Environmental Management and Regulatory

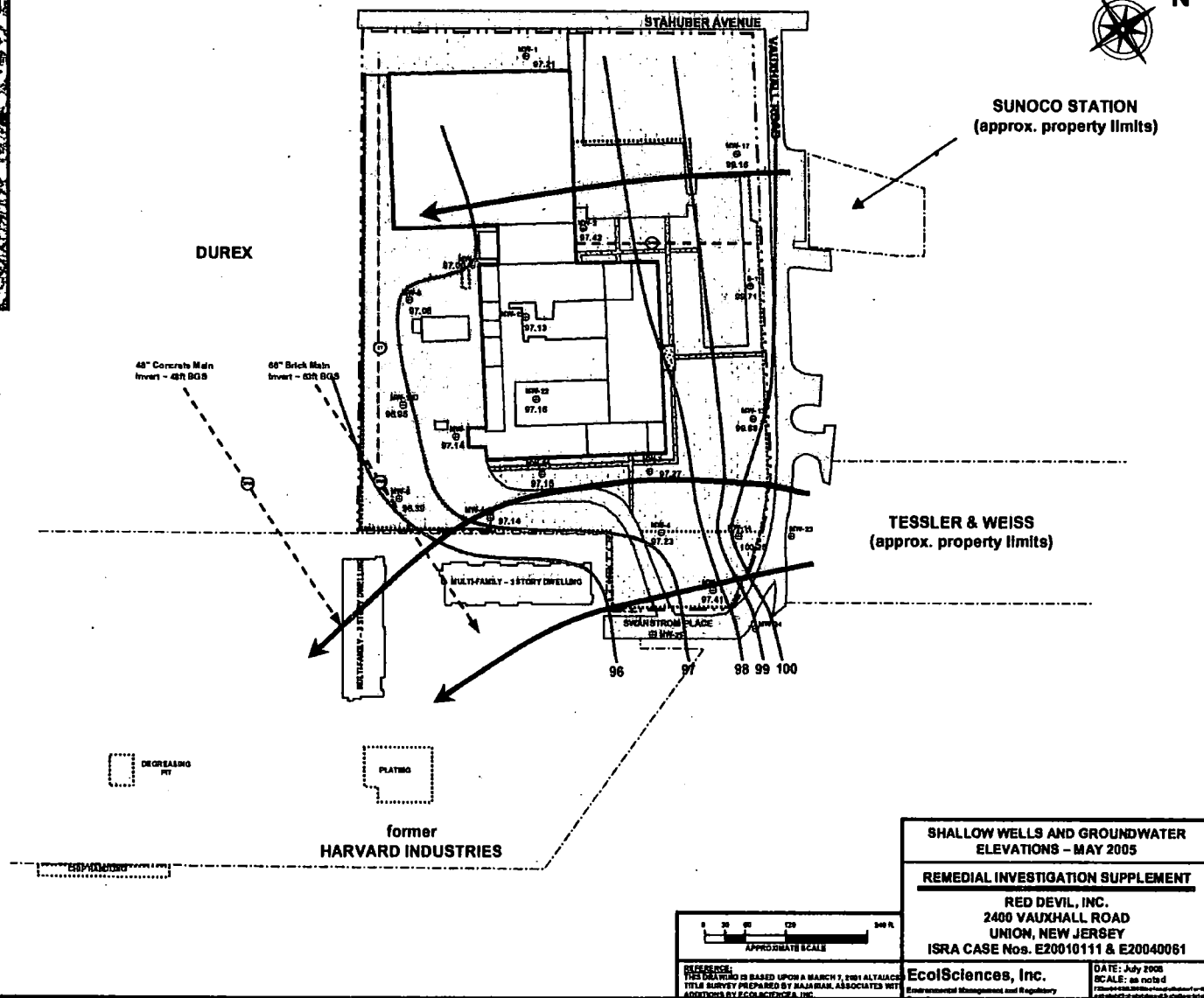
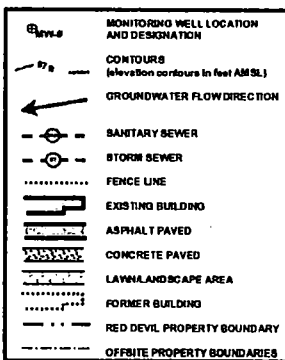
DATE: July 2008
SCALE: as noted



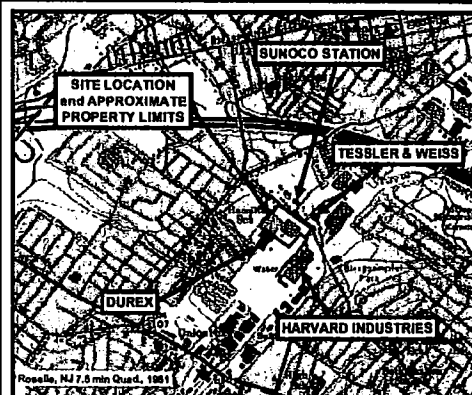
**MAY 2005
SHALLOW GROUNDWATER ELEVATIONS**

SW-1	97.71 amsl
MW-1	97.21 amsl
MW-2	97.42 amsl
MW-3	97.27 amsl
MW-4	97.23 amsl
MW-5	97.18 amsl
MW-6	96.39 amsl
MW-7	97.14 amsl
MW-8	97.08 amsl
MW-9	97 amsl
MW-100	96.55 amsl
MW-110	97.14 amsl
MW-12	97.13 amsl
MW-13	96.89 amsl
MW-14	100.25 amsl
MW-17	99.10 amsl
MW-18	97.41 amsl
MW-22	97.16 amsl

NOTES:
Contours drawn with computer assistance using
Kriging Interpolative method with default settings.



132

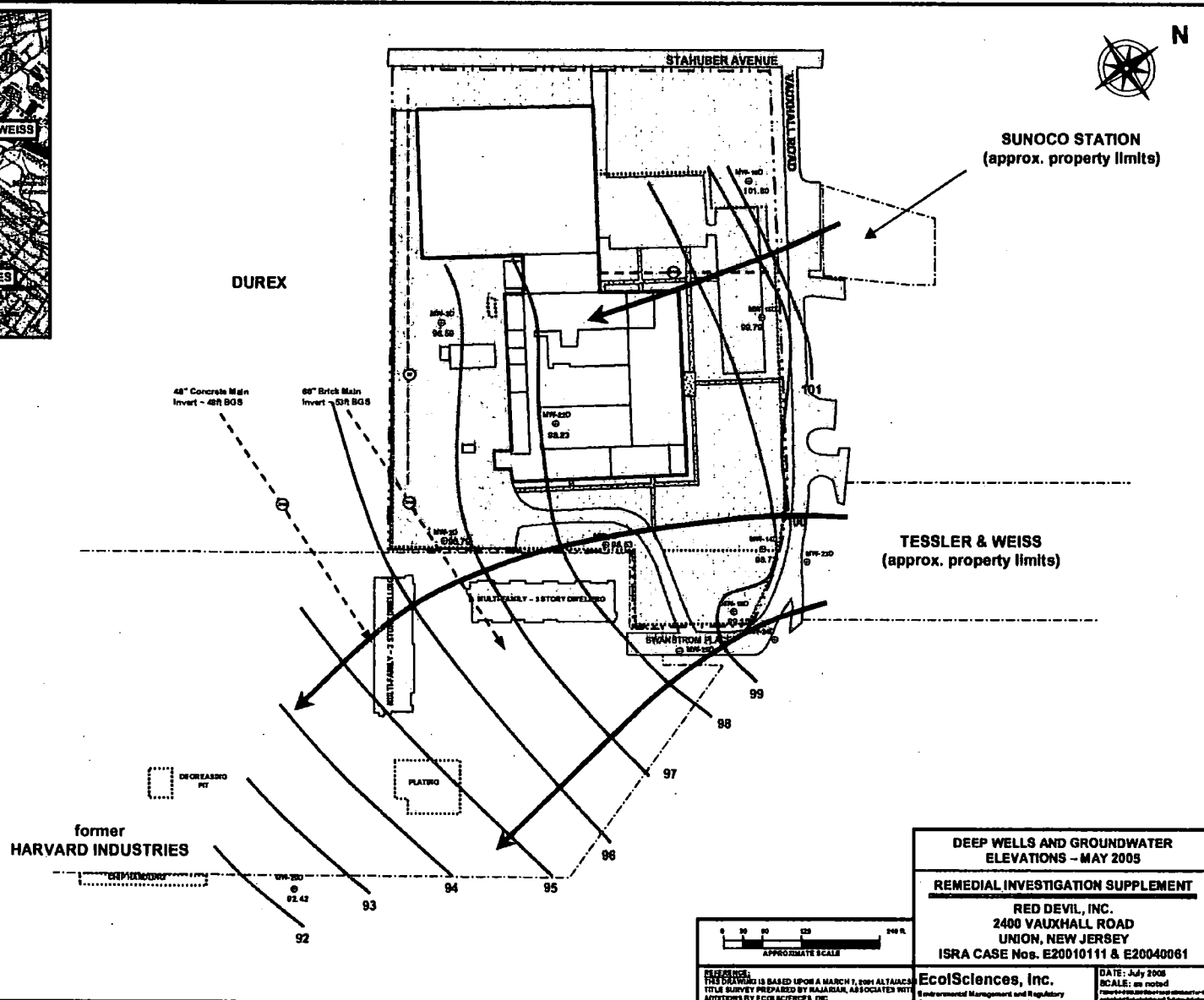
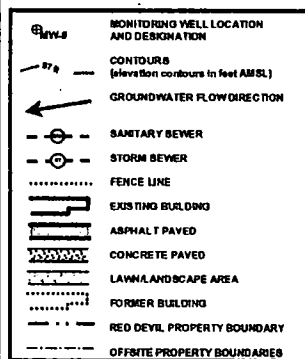


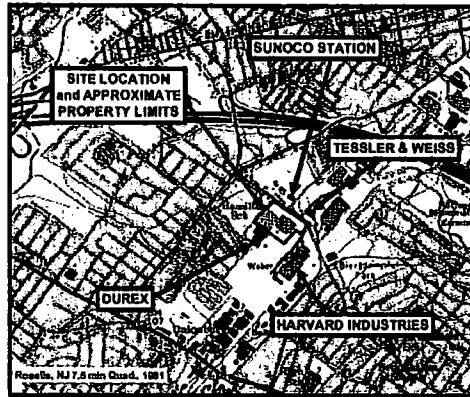
MAY 2005

DEEP GROUNDWATER ELEVATIONS

MW-10	98.53 amsl
MW-20	98.79 amsl
MW-30	98.69 amsl
MW-140	98.72 amsl
MW-150	98.79 amsl
MW-160	101.8 amsl
MW-180	99.15 amsl
MW-200	92.42 amsl
MW-220	98.23 amsl

NOTES:
Contours drawn with computer assistance using
Kriging Interpolative method with default settings.

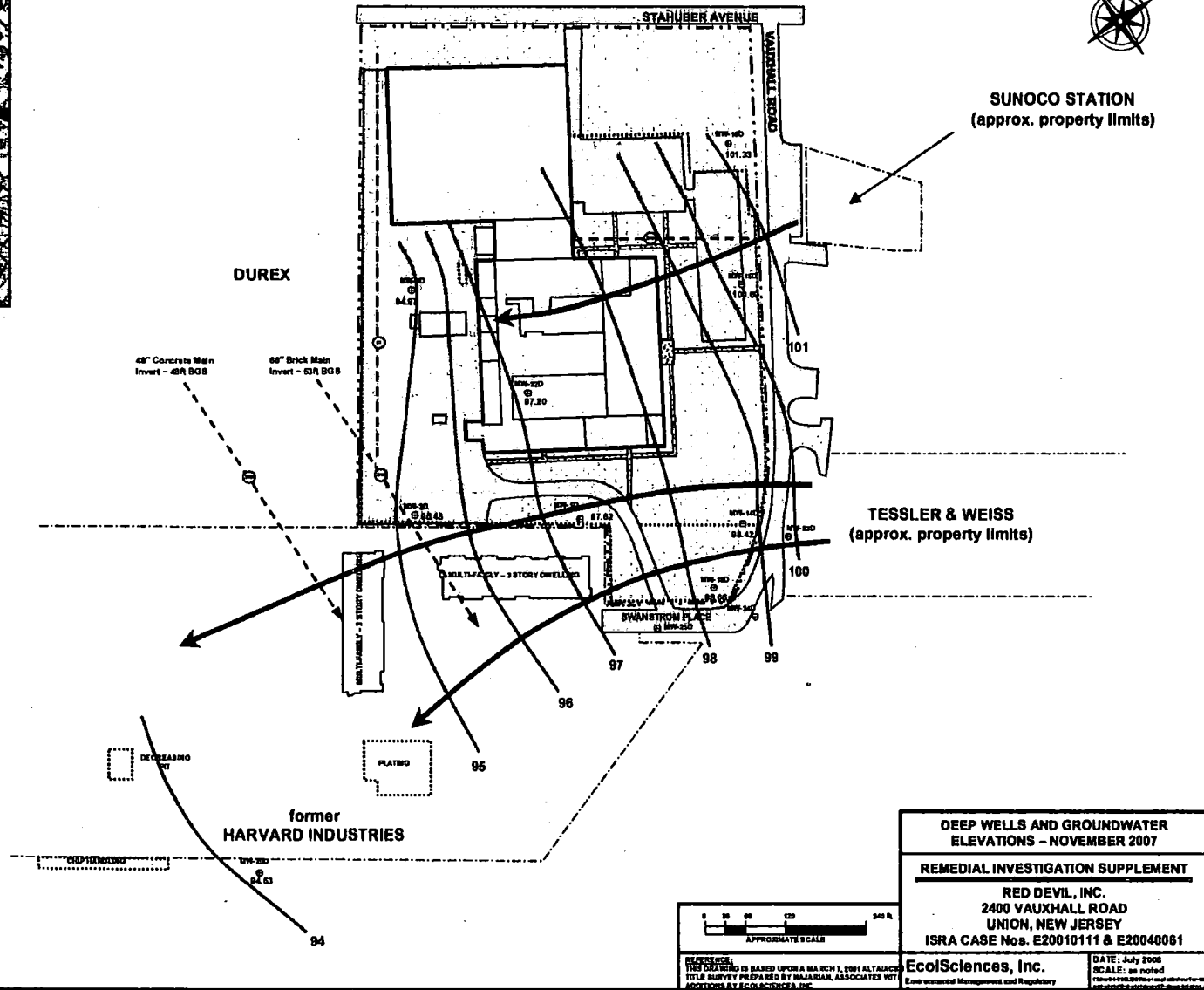
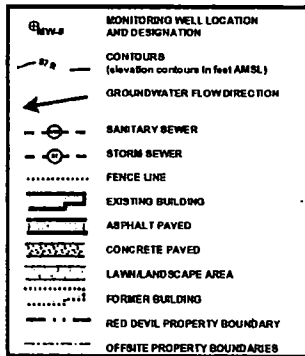


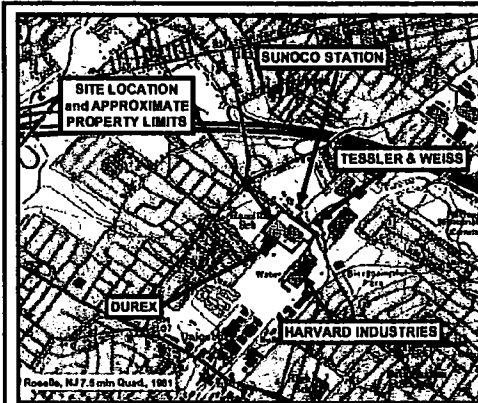


NOVEMBER 2007
DEEP GROUNDWATER ELEVATIONS

MW-10	97.62
MW-20	95.49
MW-30	94.97
MW-140	95.42
MW-150	100.59
MW-150	101.23
MW-150	98.99
MW-200	94.53
MW-220	97.20

NOTES:
Contours drawn with computer assistance using
Kriging interpolation method with default settings.

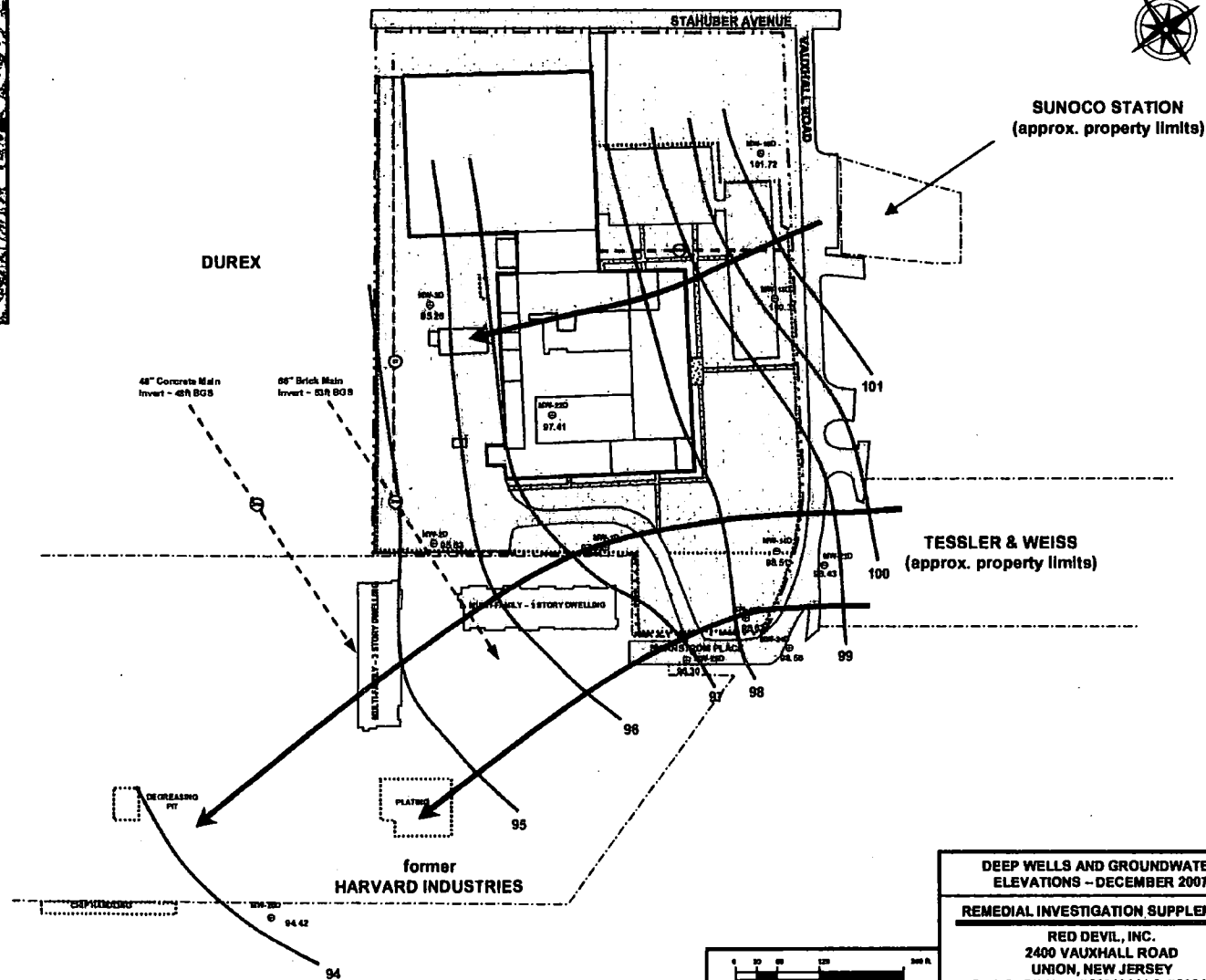
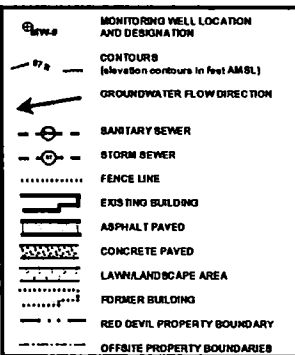




DECEMBER 2007
DEEP GROUNDWATER ELEVATIONS

MW-10	97.82 amsl
MW-20	96.83 amsl
MW-30	95.38 amsl
MW-140	99.51 amsl
MW-150	100.31 amsl
MW-160	101.72 amsl
MW-180	98.83 amsl
MW-200	94.42 amsl
MW-220	97.41 amsl
MW-230	95.43 amsl
MW-240	96.38 amsl
MW-250	95.30 amsl

NOTES:
Contours drawn with computer assistance using
Kriging interpolation method with default settings.



RED DEVIL, INC.
THIS DRAWING IS BASED UPON A MARCH 1, 1991 ALTA SURVEY PREPARED BY HALLMAN ASSOCIATES, INC. ADDITIONS BY ECO SCIENCES, INC.

DEEP WELLS AND GROUNDWATER
ELEVATIONS - DECEMBER 2007
REMEDIAL INVESTIGATION SUPPLEMENT
RED DEVIL, INC.
2400 VAUXHALL ROAD
UNION, NEW JERSEY
ISRA CASE Nos. E20010111 & E20040061

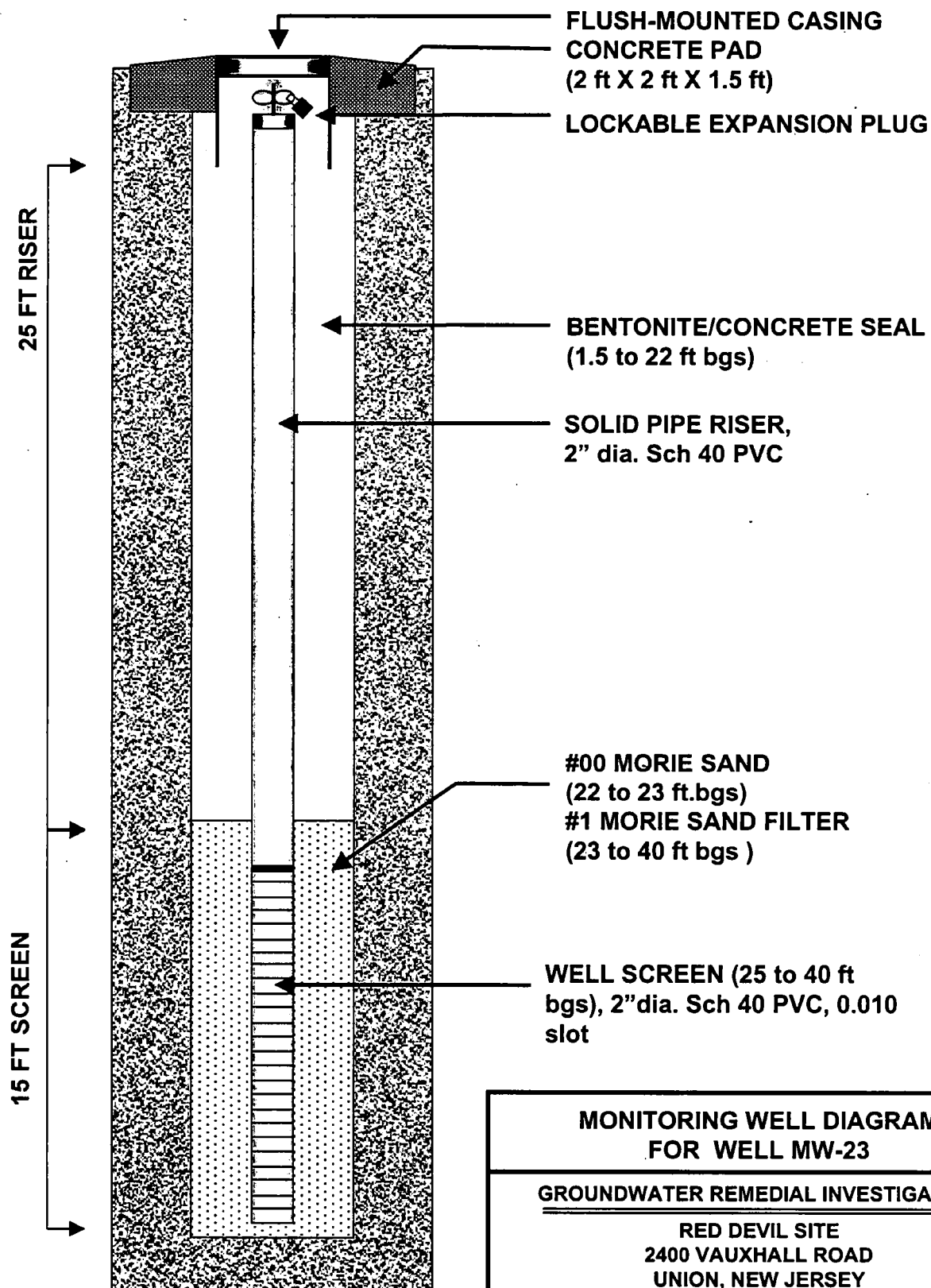
EcoSciences, Inc.
Environmental Management and Regulatory

DATE: July 2008
SCALE: as noted
PROJECT: 01010111 & 01010112



NOTES:
Contours drawn with computer assistance using
Kriging interpolative method with default settings.
Monitoring well MW-22 not used in contouring.
Groundwater elevation in MW-22 believed to be due to
field error. Elevation higher than previous and subsequent
elevation readings and anomalous when compared
to deep well readings from same location.

Attachment O



MW-23 - NJDEP PERMIT NO.
2600085434

MONITORING WELL DIAGRAM FOR WELL MW-23

GROUNDWATER REMEDIAL INVESTIGATION

RED DEVIL SITE
2400 VAUXHALL ROAD
UNION, NEW JERSEY
CASE NO. E20010111/E20040061

EcolSciences, Inc.

Environmental Management and Regulatory Compliance

DATE: 12/31/2007

SCALE: NTS

f:\hw-04-098

EcolSciences, Inc.
SOIL BORING LOG FORM

MONITORING WELL NO.: MW-23

ECOLSCIENCES JOB NO.: HW04-098		CLIENT: ADVANCE-UNION		PROJECT: RED DEVIL ISRA CASE # E20010111/E20040061	
LOCATION: Vauxhall Road, Union, N.J.				TOPO SETTING: Flat	
DRILLING CONTRACTOR: ADVANCED DRILLING INC.		DRILLER: Rick Emerson		SAMPLER:	
DRILLING RIG TYPE: George F. Failing		SIZE & TYPE OF BIT: H.S.A. 4 -1/4 I.D.		DATE STARTED: 12/06/07	
SAMPLE TYPE: 2-inch diameter split spoons		HAMMER WT. 150 lbs		DATE COMPLETED: 12/07/07	
		DROP 30 inches		TOTAL DEPTH: 40 feet	
				WATER LEVEL: Encountered water at 28 feet	

UNIFIED	SAMPLES		DEPTH (ft. BGS)	IDENTIFICATION OF SOIL / REMARKS Burmeister Soil Classification system	WELL CONSTRUCTION INFORMATION
	Blows Per Inch	Recovery (Inches) / PID (PFM)			
			1		
			2		
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
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			56		
			57		
			58		
			59		
			60		
			61		
			62		
			63		
			64		
			65		
			66		
			67		

*note see boring log for MW-23D for soils lithology

2-inch PVC Riser
0.5 ft. to 25 ft. bgs

2-inch 0.010-slot PVC Screen
25ft. to 40 ft. bgs

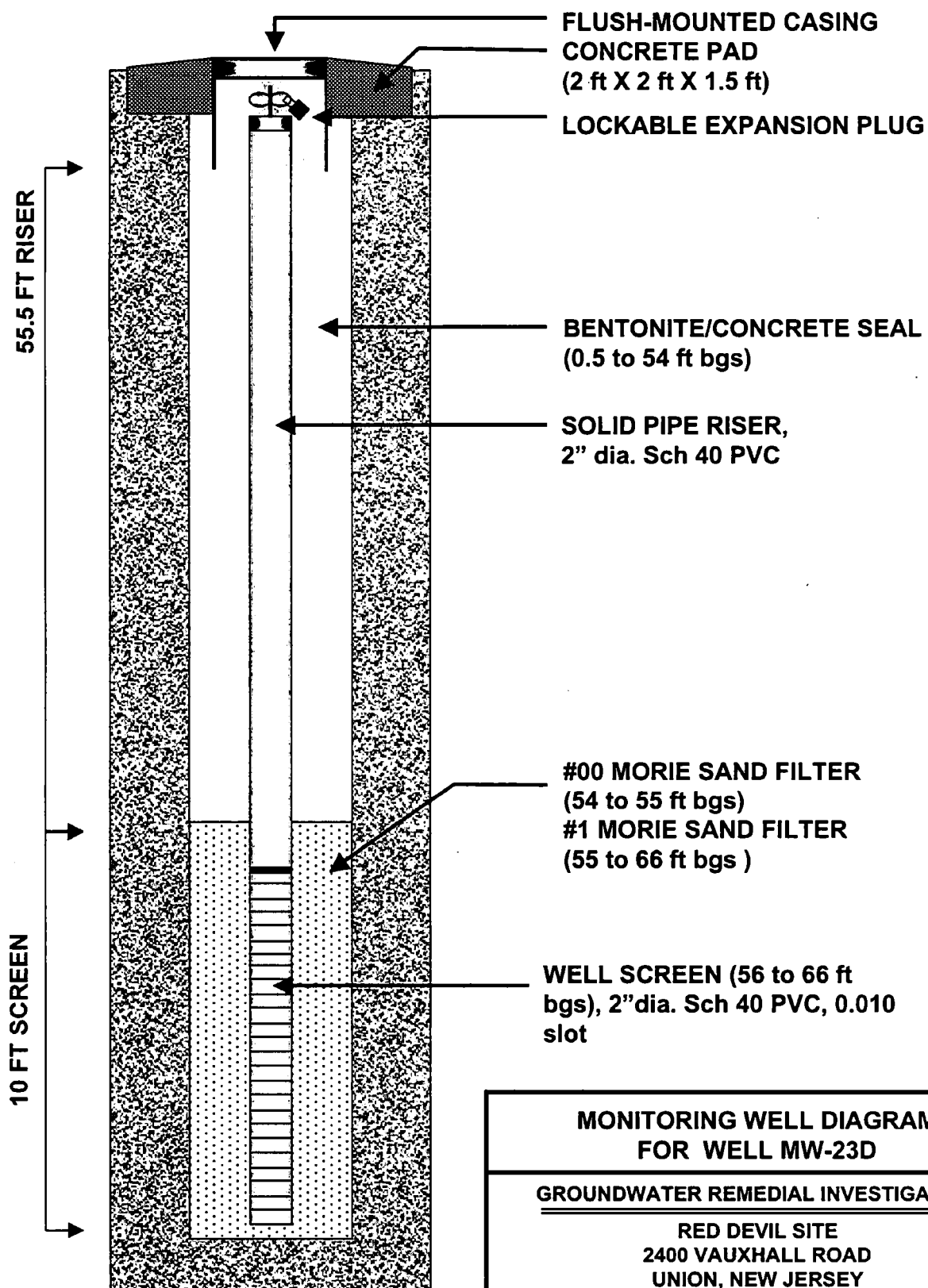
Sand Pack:
#00 MORIE SAND 22 ft. to 23 ft. bgs
#1 MORIE SAND 23 ft. to 40 ft. bgs
Grout: 1.5 ft. to 22 ft. bgs

Completed as a flush-mounted well
10-inch diameter road box set in a 2' x 2' x 1.5' concrete pad

(See attached figure for additional well construction details)

75 Fleetwood Drive, Suite 250, Rockaway, NJ 07866

Phone: (973) 366-9500 Fax: (973) 366-9593



**TOTAL DEPTH OF
BORING 66 FT BGS**
MW-23D - NJDEP PERMIT NO.
2600085435

**MONITORING WELL DIAGRAM
FOR WELL MW-23D**

GROUNDWATER REMEDIAL INVESTIGATION

**RED DEVIL SITE
2400 VAUXHALL ROAD
UNION, NEW JERSEY
CASE NO. E20010111/E20040061**

EcolSciences, Inc.

Environmental Management and Regulatory Compliance

DATE: 12/06/2007

SCALE: NTS

f:\hw-04-098

EcolSciences, Inc.
SOIL BORING LOG FORM

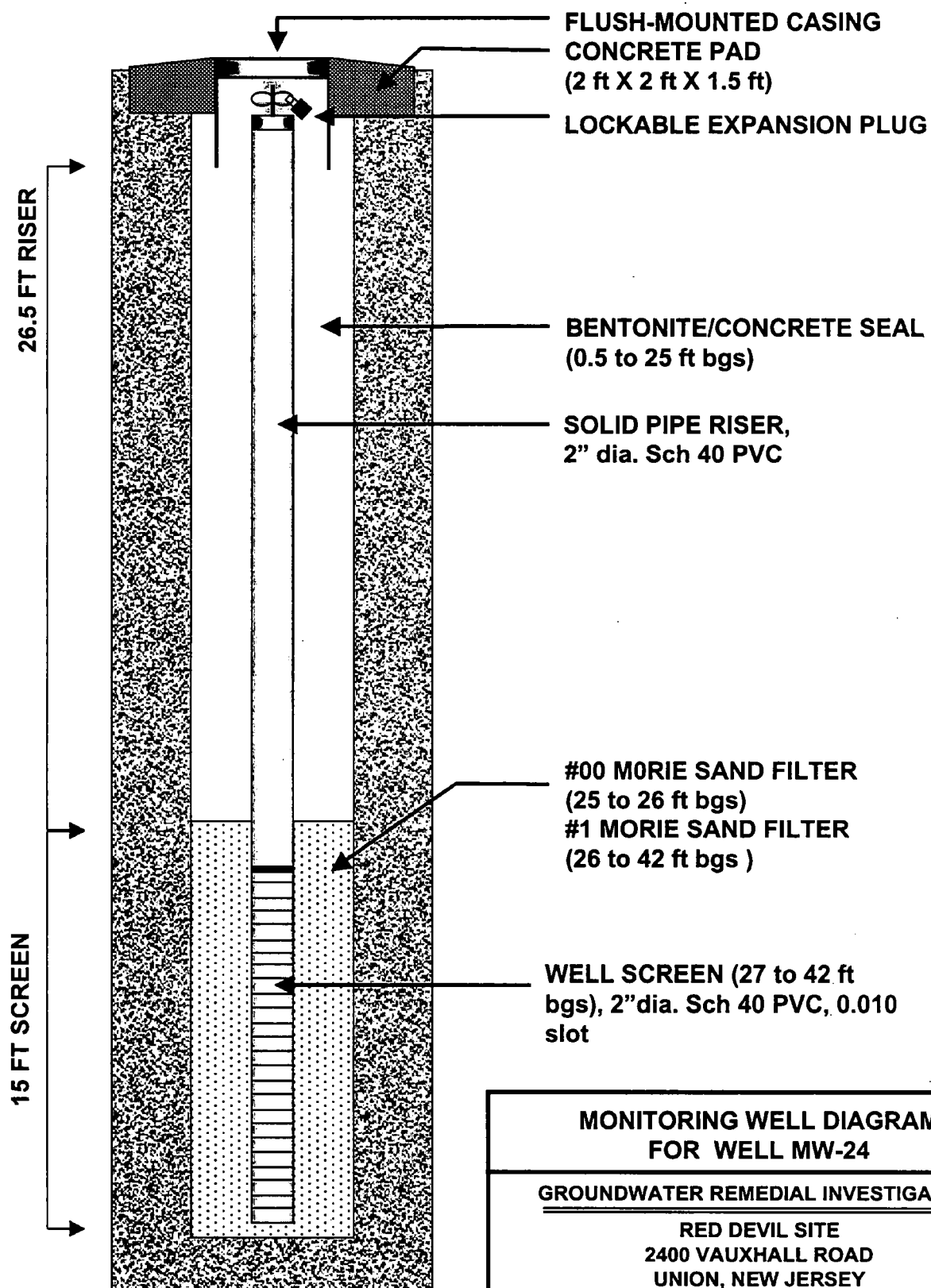
MONITORING WELL NO.: MW-23D

ECOLSCIENCES JOB NO.: HW04-098		CLIENT: ADVANCE-UNION		PROJECT: RED DEVIL ISRA CASE # E20010111/E20040061	
LOCATION: Vauxhall Road, Union, N.J.		TOPO SETTING: Flat			
DRILLING CONTRACTOR: ADVANCED DRILLING INC.		DRILLER: Rick Emerson		SAMPLER:	
DRILLING RIG TYPE: George F. Failing		SIZE & TYPE OF BIT: H.S.A. 4-1/4 I.D.		DATE STARTED: 12/05/07	
SAMPLE TYPE: 2-inch diameter split spoons		HAMMER WT. 150 lbs		DATE COMPLETED: 12/06/07	
		DROP 30 inches		TOTAL DEPTH: 65 feet	
				WATER LEVEL: Encountered water at 28 feet	

SAMPLES			DEPTH (FL BGS)	IDENTIFICATION OF SOIL / REMARKS	WELL CONSTRUCTION INFORMATION
UNIFIED	Blows Per Inch	Recovery (Inches) / PID (PPM)			
MH			1	Black topsoil 0 to 2 feet grading to reddish br. Gravel and silt, little sand 2 to 10 feet.	2-inch PVC Riser 0.0 to 56 feet bgs 2-inch 0.010-slot PVC Screen 56.0 to 66.0 feet bgs Sand Pack: 66 to 54 feet bgs Group: 1.5 to 54 feet bgs Completed as a flush-mounted well 10-inch diameter road box set in a 2' x 2' x 1.5' concrete pad (See attached figure for additional well construction details)
			2		
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
SP	8-13-14-9	0 ppm	11	10.0 to 12.0' Reddish br. Mod. To coarse Sand, little silt, little gravel.	
	Augered down		12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
GP	24-36-100/3	0 ppm	20	20.0 to 22.0' Gravel and Sand med. To coarse, trace silt	
			21		
			22		
			23		
			24		
			25		
			26		
GP	16-14-7-8	0 ppm	27	27.0 to 29.0' Silt and Gravel, gravel coarse to med, trace fine sand water at 28 feet	
			28		
			29		
			30		
			31		
			32		
			33		
			34		
			35		
			36		
			37		
			38		
			39		
ML	7-8-6-8	0 ppm	40	40.0 to 42.0' SILT, trace gravel reddish br. mod. Stiff to soft rapid dilatancy in laminations	
			41		
			42		
			43		
			44		
GM	24-16-14-11	0 ppm	45	45 to 47' stiff to very stiff reddish br. SILT and gravel, little coarse to mod. Sand rapid dilatancy silt in lenses	
			46		
			47		
			48		
			49		
GM	11-12-14-19	0 ppm	50	50 to 52' stiff SILT, some f. to med gravel, trace sand	
			51		
			52		
			53		
			54		
ML	6-7-8-8	0 ppm	55	55 to 57' med. Stiff reddish Silt and clay, slight plasticity, some gravel, trace sand. (alternating silt & clay lamellae)	
			56		
			57		
			58		
			59		
GM	10-14-27-48	0 ppm	60	60 to 62' very stiff to hard reddish br. SILT & gravel, some sand (Till)	
			61		
			62		
			63		
			64		
GM/W.R.	60-60-94-50	0 ppm	65	65 to 67' Hard till and weathered rock	
			66		
			67		

75 Fleetwood Drive, Suite 250, Rockaway, NJ 07866

Phone: (973) 366-9500 Fax: (973) 366-9593



TOTAL DEPTH OF
BORING 42 FT BGS

MW-24 - NJDEP PERMIT
NO. 2600085432

MONITORING WELL DIAGRAM FOR WELL MW-24

GROUNDWATER REMEDIAL INVESTIGATION

RED DEVIL SITE
2400 VAUXHALL ROAD
UNION, NEW JERSEY
CASE NO. E20010111/E20040061

EcolSciences, Inc.

Environmental Management and Regulatory Compliance

DATE: 12/04/2007

SCALE: NTS

f:\hw-04-098

EcolSciences, Inc.
SOIL BORING LOG FORM

MONITORING WELL NO.: MW 24

ECOLSCIENCES JOB NO.: HW04-098		CLIENT: ADVANCE-UNION		PROJECT: RED DEVIL ISRA CASE #E20010111/E20040061	
LOCATION: Vauxhall Road, Union, N.J.				TOPO SETTING: Flat	
DRILLING CONTRACTOR: ADVANCED DRILLING INC.		DRILLER: Rick Emerson		SAMPLER:	INSPECTOR: Charles Maroni
DRILLING RIG TYPE: George F. Failing		SIZE & TYPE OF BIT: H.S.A. 4-1/4 I.D.		DATE STARTED: 12/04/07	DATE COMPLETED: 12/04/07
SAMPLE TYPE: 2-inch diameter split spoons		HAMMER WT. 150 lbs	DROP 30 inches	TOTAL DEPTH: 42 feet	WATER LEVEL: Encountered water @ 28 feet

SAMPLES			DEPTH	IDENTIFICATION OF SOIL / REMARKS	WELL CONSTRUCTION INFORMATION
UNIFIED	Blows Per Inch	Recovery (Inches) / PID (PPM)	(FL BGS)	Burmeister Soil Classification system	
			1		
			2		
			3		
			4		
			5		
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*note see boring log for MW-24D for soils lithology

2-inch PVC Riser:
0.5 ft to 26.5 ft bgs

2-inch 0.010-slot PVC Screen
27 ft to 42 ft bgs

Sand Pack:
25 to 26 ft bgs #00 MORIE SAND
26 to 42 ft bgs #1 MORIE SAND

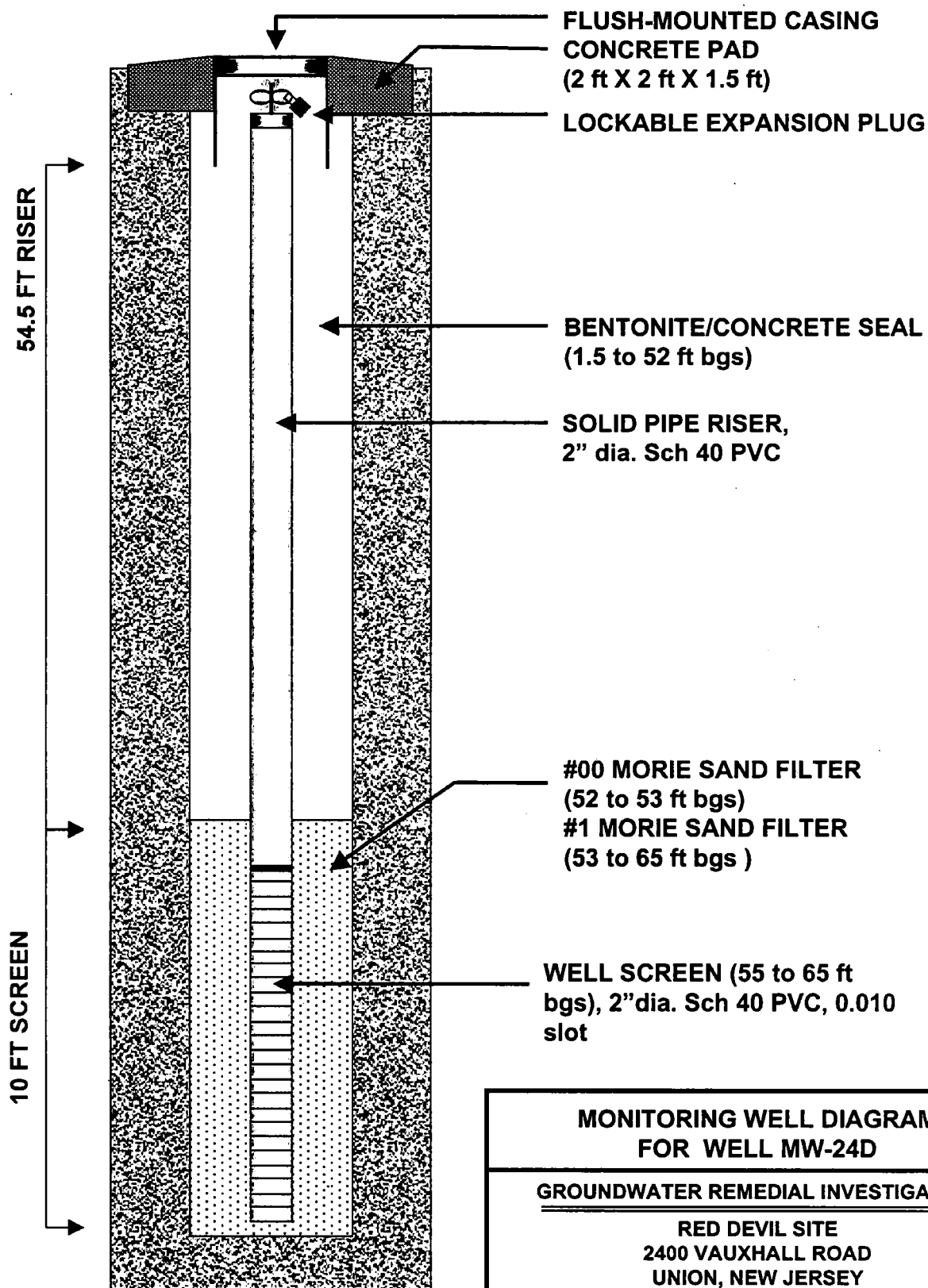
Grout:
0.5 to 25 ft bgs

Completed as a flush-mounted well
10-inch diameter road box set in a 2' x 2' x 1.5' concrete pad

(See attached figure for additional well construction details)

75 Fleetwood Drive, Suite 250, Rockaway, NJ 07866

Phone: (973) 366-9500 Fax: (973) 366-9593



**TOTAL DEPTH OF
BORING 65 FT BGS
MW-24D - NJDEP PERMIT NO.
2600085433**

**MONITORING WELL DIAGRAM
FOR WELL MW-24D**

GROUNDWATER REMEDIAL INVESTIGATION

**RED DEVIL SITE
2400 VAUXHALL ROAD
UNION, NEW JERSEY
CASE NO. E20010111/E20040061**

EcolSciences, Inc.

Environmental Management and Regulatory Compliance

DATE: 12/04/2007

SCALE: NTS

f:\hw-04-098

EcolSciences, Inc.
SOIL BORING LOG FORM

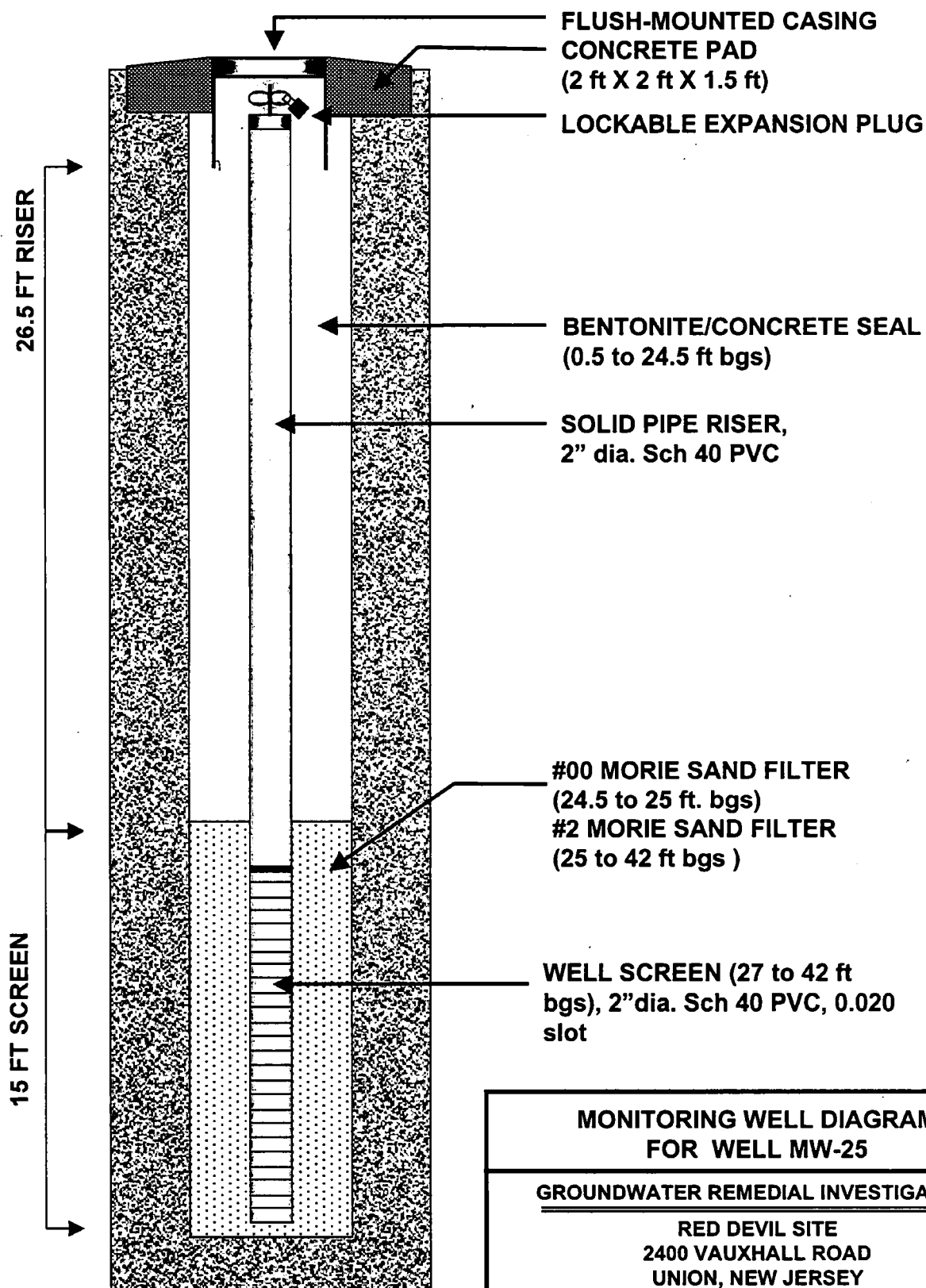
MONITORING WELL NO.: MW 24D

ECOLSCIENCES JOB NO.: HW04-098		CLIENT: ADVANCE-UNION		PROJECT: RED DEVIL ISRA CASE #E20010111/E20040061	
LOCATION: Vauxhall Road, Union, N.J.				TOPO SETTING: Flat	
DRILLING CONTRACTOR: ADVANCED DRILLING INC.		DRILLER: Rick Emerson		SAMPLER:	INSPECTOR: Charles Maroni
DRILLING RIG TYPE: George F. Failing		SIZE & TYPE OF BIT: H.S.A. 4-1/4 I.D.		DATE STARTED: 12/05/07	DATE COMPLETED: 12/04/07
SAMPLE TYPE: 2-inch diameter split spoons		HAMMER WT. 150 lbs	DROP 30 inches	TOTAL DEPTH: 65 feet	WATER LEVEL: Encountered water @ 28 feet

SAMPLES			DEPTH	IDENTIFICATION OF SOIL / REMARKS	WELL CONSTRUCTION INFORMATION
UNIFIED	Blows Per Inch	Recovery (Inches) / PFD (PPM)	(FL BGS)		
MH			1	Light br. to tan backfill materials silty fine sandy loam	Fill 2-inch PVC Riser: 0.5 to 55 feet bgs 2-inch 0.010-slot PVC Screen: 55 ft to 65 ft Sand Pack: 65 to 52.5 feet bgs Grout: 0.5 to 52.5 feet bgs Completed as a flush-mounted well 10-inch diameter road box set in a 2' x 2' x 1.5' concrete pad (See attached figure for additional well construction details)
			2		
			3		
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
SM	12-12-9-14	0 ppm	12	10.0 to 12.0' Reddish brown med. Dense fine to med. SAND little silt, trace gravel	
	Augered down		13		
			14	med. Gravel and sand in cuttings	
			15		
			16		
			17		
			18		
			19		
			20		
			21		
			22		
			23		
			24		
GW	18-18-17-32	0 ppm	25	25.0 to 27.0' Reddish brown Gravel, little coarse SAND sampling split-spoon breaking coarse gravel clasts moist	
			26		
			27		
			28		
GP	7-8-8-7	0 ppm	30	30.0 to 32.0' loose, reddish-br. Fine to med. SAND, some med. To fine gravel wet	
			31		
			32	drilled down to 39 ft. sand & gravel in cuttings	
			33		
			34		
			35		
			36		
			37		
			38		
			39		
			40		
			41		
GM	8-11-14-16	0 ppm	39		
			42		
			43		
			44		
			45		
			46		
			47		
			48		
			49		
			50		
			51		
GM	27-100/5 in.	0 ppm	50	50 to 52' REFUSAL Brown silt and Sand, some gravel likely cobble, moist stone in shoe of s.s.	
			51		
			52		
			53		
GM/SP	8-10-14-7	0 ppm	54	55 to 57' hard drilling br. To reddish br. Stiff 1.5 ft of very fine SAND 0.5 ft. of med. To f. gravel, some sand little silt trace clay running sand in augers tripping spoon out	
			55		
			56		
			57		
SP/GM	17-45-63-62	0 ppm	60	60 to 62' Hard top of spoon very f. sand 0.5 ft. middle hard silt, little coarse sand little med. Gravel lower Silt high dilatancy as layer in till	
			61		
			62		
			63		
GM	24-69-100/3		64	65 to 67' REFUSAL very stiff to hard, br. Silt and gravel br. to reddish br. Glacial till and weathered rock. E.O.B. @ 65 feet	
			65		
			66		
			67		

75 Fleetwood Drive, Suite 250, Rockaway, NJ 07866

Phone: (973) 366-9500 Fax: (973) 366-9593



**TOTAL DEPTH OF
BORING 42 FT BGS**
MW-25 - NJDEP PERMIT NO.
2600085436

**MONITORING WELL DIAGRAM
FOR WELL MW-25**

GROUNDWATER REMEDIAL INVESTIGATION

RED DEVIL SITE
2400 VAUXHALL ROAD
UNION, NEW JERSEY
CASE NO. E20010111/E20040061

EcolSciences, Inc.

Environmental Management and Regulatory Compliance

DATE: 11/30/2007

SCALE: NTS

f:\hw-04-098

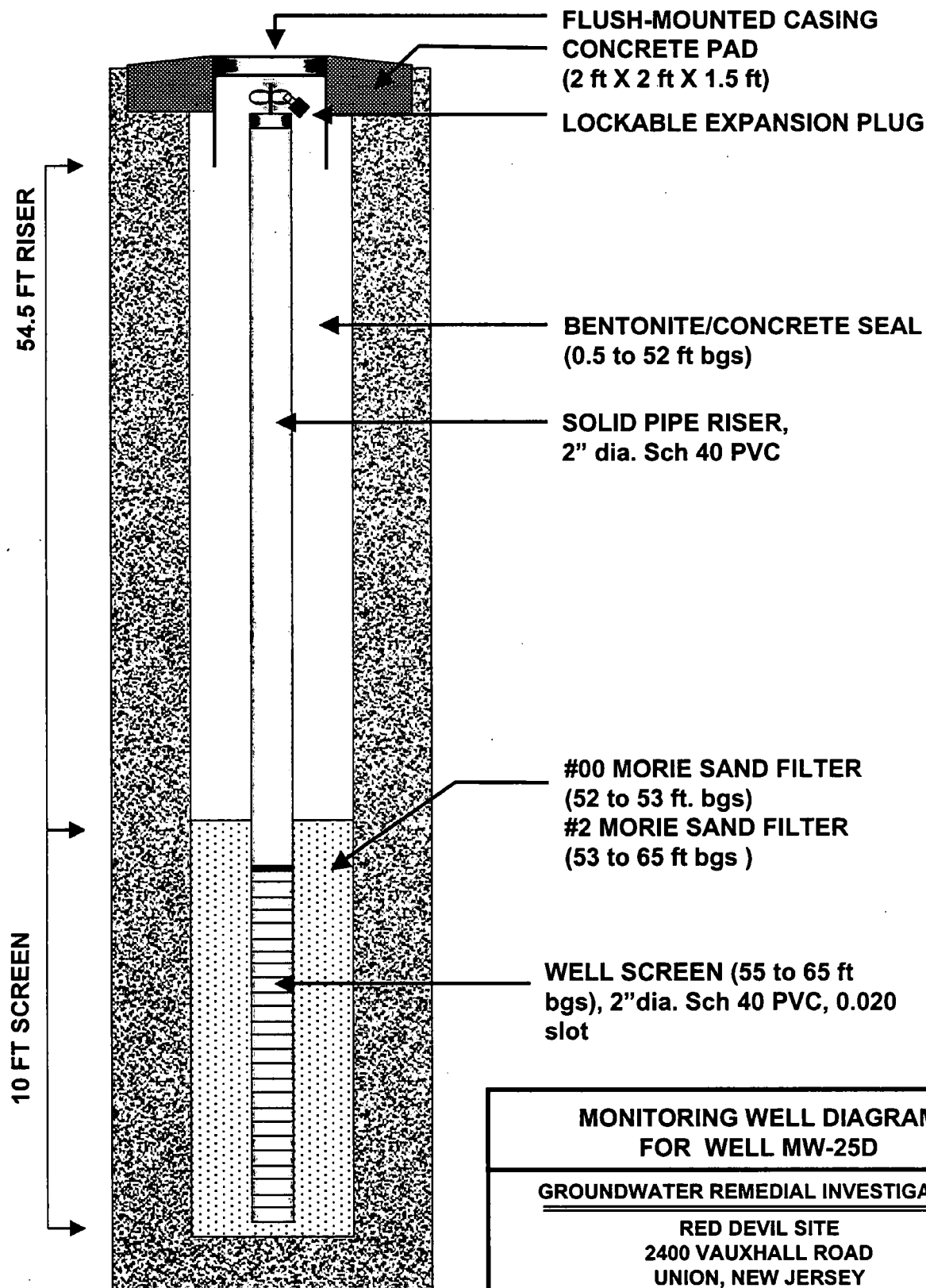
EcolSciences, Inc.
SOIL BORING LOG FORM

MONITORING WELL NO.: MW 25

ECOLSCIENCES JOB NO.: HW04-098		CLIENT: ADVANCE-UNION		PROJECT: RED DEVIL ISRA CASE #E20010111/E20040061	
LOCATION: Vauxhall Road, Union, N.J.				TOPO SETTING: Flat	
DRILLING CONTRACTOR: ADVANCED DRILLING INC.		DRILLER: Rick Emerson		SAMPLER: Scott Vozza	
DRILLING RIG TYPE: George F. Failing		SIZE & TYPE OF BIT: H.S.A. 4 - 1/4 I.D.		DATE STARTED: 11/30/07	
SAMPLE TYPE: 2-inch diameter split spoons		HAMMER WT. 150 lbs		DATE COMPLETED: 11/30/07	
		DROP 30 inches		TOTAL DEPTH: 42 feet	
				WATER LEVEL: Encountered water @ 32 feet	
SAMPLES		DEPTH		IDENTIFICATION OF SOIL / REMARKS	
UNIFIED	Blows Per Inch	Recovery (Inches) / PID (PPM)	(Ft. BGS)	Burmeister Soil Classification system	
			1	<p>*note see boring log for MW-25D for soils lithology</p> <p>2-inch PVC Riser 0.5 ft to 26.5 ft bgs</p> <p>2-inch 0.020-slot PVC Screen 27 ft to 42 ft bgs</p> <p>Sand Pack: 24.5 ft to 25 ft bgs #00MORIE SAND 25 to 42 ft bgs #2 MORIE SAND</p> <p>Grout: 0.5 to 24.5 ft bgs</p> <p>Completed as a flush-mounted well 10-inch diameter road box set in a 2' x 2' x 1.5' concrete pad</p> <p>(See attached figure for additional well construction details)</p>	
			2		
			3		
			4		
			5		
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			8		
			9		
			10		
			11		
			12		
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**TOTAL DEPTH OF
BORING 65 FT BGS**
MW-25D - NJDEP PERMIT NO.
2600085437

MONITORING WELL DIAGRAM FOR WELL MW-25D

GROUNDWATER REMEDIAL INVESTIGATION

RED DEVIL SITE
2400 VAUXHALL ROAD
UNION, NEW JERSEY
CASE NO. E20010111/E20040061

EcolSciences, Inc.

Environmental Management and Regulatory Compliance

DATE: 11/30/2007

SCALE: NTS

f:\hw-04-098

EcolSciences, Inc.
SOIL BORING LOG FORM

MONITORING WELL NO.: 1MW 25D

ECOLSCIENCES JOB NO.: HW04-098		CLIENT: ADVANCE-UNION		PROJECT: RED DEVIL ISRA CASE #E20010111/E20040061	
LOCATION: Vauxhall Road, Union, N.J.				TOPO SETTING: Flat	
DRILLING CONTRACTOR: ADVANCED DRILLING INC.		DRILLER: Rick Emerson		SAMPLER: Scott Vozza	
DRILLING RIG TYPE: George F. Failing		SIZE & TYPE OF BIT: H.S.A. 4-1/4 I.D.		DATE STARTED: 11/29/07	
SAMPLE TYPE: 2-inch diameter split spoons		HAMMER WT. 150 lbs		DATE COMPLETED: 11/30/07	
		DROP 30 inches		TOTAL DEPTH: 65 feet	
				WATER LEVEL: Encountered water @ 32 feet	

UNIFIED	Blows Per Inch	Recovery (Inches) / PID (PPM)	DEPTH (Ft. BGS)	IDENTIFICATION OF SOIL / REMARKS	WELL CONSTRUCTION INFORMATION
SM			1		Fill
	29-15-15-11	0 ppm	2		2-inch PVC Riser
			3	0 to 2'	0.5 to 55 feet bgs
GM		0 ppm	4		
	9-12-13-13		5	5 to 7'	2-inch 0.010-slot PVC Screen
			6		55 ft to 65 ft
			7		
			8		
			9		
		12 in.	10		Sand Pack:
GM		0 ppm	11	10.0 to 12.0'	65 to 52.5 feet bgs
			12		Grout:
	Augered down		13		0.5 to 52.5 feet bgs
			14		
			15		Completed as a flush-mounted well
			16		10-inch diameter road box set in a 2' x 2' x 1.5' concrete pad
			17		(See attached figure for additional well construction details)
			18		
GW		0 ppm	19	20 to 22'	
	24-30-36-20		20		
			21		
			22		
			23		
GP	13-9-9-8	0 ppm	24	25.0 to 27.0'	
			25		
			26		
			27		
			28		
GP	11-21-27-28	0 ppm	29	29 to 31'	
			30		
GP	44-17-12-8	0 ppm	31	31 to 33'	soil sample taken for analysis from 32 to 32.5 ft. *mw-25D-32
			32		
			33		
			34		
			35		
			36		
			37		
			38		
			39		
ML	2-2-4-7	0 ppm	40	40 to 42'	
			41		
			42		
			43		
			44		
ML	4-7-8-8	0 ppm	45	45 to 47'	
			46		
			47		
			48		
			49		
			50		
			51	contact	change at 51 feet stiffer drilling
			52		
			53		
		24 in.	54		
GW	28-30-52-57	0 ppm	55	55 to 57'	
			56		
			57		
			58		
			59		
			60		
			61		
			62		
WR	24-32-60	0 ppm	63	63 to 65'	sample taken for analysis mw25D-64
	100/4 in.		64		
			65		
			66		
			67		

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Attachment P

SITE INVESTIGATION REPORT

PART I: GENERAL INFORMATION

Site Name: Premrefco, Inc.
Aka: Premesco, Inc.
A.B.M. Investment Co.
Tessler and Weiss, Inc.

Address: 2389 Vauxhall Rd.
Municipality: Union **State:** New Jersey **Zip Code:** 07083-5036
County: Union
EPA ID No.: NJD980642490
Block: 5609 **Lot(s):** 31 and 5
Latitude: +40.70777 ° **Longitude:** -74.27611° (decimal)
40 ° 42' 28" -74 ° 16' 34" (ddmmss)

USGS Quadrangle: Roselle
Acreage: 2.65 **SIC Code:** 3399, 3911

Block 5609 Lot 31

Current Owner: ABM Investment Co.
Mailing Address: 2389 Vauxhall Rd.
City: Union **State:** NJ **Zip Code:** 07083
Telephone No.: (908) 686-0513

Operator: Same

Block 5609 Lot 5

Current Owner: ABM Investment Co.
Mailing Address: 2389 Vauxhall Rd.
City: Union **State:** NJ **Zip Code:** 07083
Telephone No.: (908) 686-0513

Operator: Vacant Lot

Owner/Operator History:

NAME	OPERATOR/ OWNER	DATES	
		FROM	TO
J.L. Hammett Company	Owner	?	March 1954
A.B.M. Investment Co. Premesco	Owner	March 1954	present
A.B.M, Premesco, and Premrefco	Operator	1954	present

Premrefco, Inc. operates in a building shared with two other corporate entities which include A.B.M. Investment Co. (aka Tessler and Weiss) and Premesco, Inc. Four properties are located adjacent to each other but three have separate owners. The following table summarizes the properties and their ownership.

Block	Lot	Description	Owner
5609	31	The main building in which Premrefco and Premesco operate are located on this lot.	ABM
5609	5	A small 50 x 200 foot parcel likely the site of a storm sewer containment structure	ABM
5609	7	Primarily wooded with a parking lot.	Mark Tessler
5609	4.01	Additional parking for Premrefco and a building that is not related to the current operations of Premrefco	TNJC Advertising Co. Inc.

Mark Tessler is an owner, operator and president of each of the companies. TNJC Advertising is listed as the owner of Lot 4.01 but does not seem to be a viable business. TNJC's address is listed as 2389 Vauxhall Road, the same address as Premrefco, Premesco and ABM. (Attachment A, Map 1A)

Surrounding Land Use (zoning, adjacent properties): Premrefco Inc. (Premrefco), Premesco Inc. (Premesco), and A.B.M. Investment Company, Inc. (ABM) are located in the same building at 2389 Vauxhall Road in Union, New Jersey. Their names are used interchangeably throughout the report.

Premrefco is surrounded by commercial establishments (Maps 1 and 2). The southeastern portion of the site is bordered by KCS Lighting, Inc. Stonco Lighting Division (Stonco). The Site is bordered to the southwest by Vauxhall Road and across Vauxhall Road, a large, vacated manufacturing facility formerly operated by Red Devil, Inc. is located. To the northwest of the Site is a facility operated by Federal Express. The facility arranges the distribution of packaging and cargo and provides maintenance on their truck fleet. Premrefco also owns a property and building to the west of its access driveway. ABM owns a small parcel of land adjacent to the western corner of Premesco.

Distance to Nearest Residence or School: A residence is located immediately adjacent to the Premrefco parking lot in the northern portion of the Site. (Map 2) The residence is approximately 340 feet from the facility building.

Direction: North

Population Density (residents per square mile): 5,786 (Attachment A)

PART II: SITE OPERATIONS

Discuss all current and past operations at the site. Include a description of the buildings or structures on site and their physical condition. In addition, tabulate all areas of concern (AOC) and provide the waste source type for each AOC. Include the physical state of

waste at each AOC as stored or disposed, the condition of containers and the presence or absence of secondary containment and the volume of waste stored or disposed, or the volume or area of contaminated soil or water.

Premesco has operated on the 2389 Vauxhall Road property in Union New Jersey from 1954 to the present. (Maps 2 and 3). Prior to 1954, the property was owned by the J.L. Hammett Company who manufactured school supplies. A 1958 Sanborn Map indicated that J.L. Hammett operated a facility located northeast of Premesco, so it is likely that they sold the land they owned in the southern part of their property to Premesco (Map 4). Information on the operation of J.L. Hammett was not available. Information obtained from an NJDEP Preliminary Assessment (Attachment B) of the Premesco property indicated that the subject property had been farmland in 1951 and that development of the property occurred in 1954. The 1958 Sanborn Map (Map 4) indicated that a jewelry manufacturing facility operated on the subject property. Three additions have been added to the original structure in 1975, 1982 and 2004. The predominately brick building is approximately 44,000 square feet in area and due to the use of precious metals in its operations, the building is well-maintained and secured by guards.

The building in which Premesco operates has a sign identifying it as Tessler and Weiss, but the building houses three companies which are all related. ABM is a Manufacturing Management Consultant that also operates as Tessler and Weiss. Both ABM and Premesco have operated on the Site since its beginnings in 1954. Premesco manufactures jewelry including ring sets and other jewelry from raw materials. Prior to 1982, scraps of gold generated from jewelry manufacturing were sent out to a private gold refiner. In 1982, Premesco bought a gold refining company and moved it into the site building, naming it Premrefco.

The SIC Codes for Premesco are 3911 – Jewelry and Precious metal and 3915 - Jewelers' Findings and Materials, and Lapidary Work. Premesco engages in specific operations involved in the jewelry manufacturing process including melting; alloying gold with copper, nickel, zinc or silver; casting jewelry and flattening of metal bars; blanking into washers; pressing, forming, decorating and polishing gold; and the setting of precious stones. (Attachment B)

Premrefco refines scrap gold generated in the manufacturing activities at the site. The refining process involves dissolving scrap gold metal with a solution called Aqua-Regia which consists of 80% nitric acid and 20% hydrochloric acid. After it is dissolved, gold is precipitated from the solution and the remaining acid solution containing zinc, copper, nickel and silver is stored in a 3,200-gallon fiberglass aboveground storage tank (AST). Wastes accumulated in the AST are shipped within 60 days to an appropriate hazardous waste disposal facility. (Attachment C)

ABM has offices in the on-site building and adjacent to and west of the site is a small property owned by ABM. The ABM property is only 200 x 50 feet in area, but the 1958 Sanborn Map indicated that there had been several small structures on the property. The New Jersey Department of Environmental Protection (NJDEP), Bureau of Environmental Measurements and Site Assessment (SA) believes they may have been residential buildings with small sheds or garages. During the subsurface investigation of the ABM Property, SA encountered concrete refusal when boring at depths of two feet below ground surface (bgs). The concrete refusals were likely to be foundations of the old structures.

SA initiated an investigation of Premesco in early 2010 as part of a regional investigation to

identify the source of indoor air contamination at the Hickory Manor Condominiums (condos) located at Vauxhall Road and Swanstrom Place in Union, NJ. In the early 2000's, the condos were built on the property formerly operated by the Amerace Corporation, Division of Harvard Industries/Elastic Stop Nut Division (Harvard Industries). The Harvard Industries facility was a large manufacturing plant that produced parts for the auto industry. Harvard Industries was required to conduct remedial investigations at their facility before they could be issued a No Further Action designation (NFA). After several years of tenant occupancy, trichloroethylene (TCE) was detected in the indoor air of the condos at concentrations exceeding NJDEP Rapid Action Levels. The NJDEP responded by installing sub-slab remediation systems in most of the condo units. Two suspected sources of contamination detected at the condos were Red Devil Inc., located adjacent to and hydraulically upgradient of the condos and Harvard Industries. (Map 2). After many years of environmental investigation and remediation, Harvard Industries was granted an NFA designation for its site in 1999 (Attachment D). Red Devil ceased operations at their Vauxhall Road site in 2001 and future plans called for a condominium community to be developed on their site.

Since a subsurface investigation had never been conducted at Premesco, SA was tasked to investigate Premesco as a suspected source of the TCE detected in the indoor air at the condos. SA conducted the site investigation in September and October of 2010. SA also conducted a subsurface investigation at Stonco located adjacent to and southeast of Premesco (Map 2). The two investigations were conducted concurrently because boring locations to assess areas of concern at Premesco were located on the Stonco site.

SA conducted a file review at the Union County Courthouse in June 2010. The file review produced three inspection reports conducted by the Suburban Regional Health Commission of East Orange, NJ in September 1982 that supported the use of chlorinated solvents at Premesco (Attachment E). The inspection report referred to different rooms in which manufacturing activities occurred. The report also detailed the use of a cleaning area in which a 5 year-old, 20-gallon vapor degreaser was used to clean jewelry. The solvent used was reportedly 1,1,1-trichloroethane (TCA). Three other processes involved in the cleaning and processing jewelry since the operations began in 1954 were detailed and included:

- ammonia and acid cleaning with vent hood
- Lacquer thinning for enamel paint on rings. Rings were submerged in quart containers with covers and allowed to stand. Done under hoods.
- Detergent and water final rinse done under hoods

Premrefco initiated gold refining activities in a new addition to the building in 1982. Air emissions resulting from the gold recovery processes were collected by five fume hoods that are connected to three alkaline scrubbers that vent the acid fumes through three stacks. The original inspection report from September 1982 indicated that the vent stacks needed permits. The inspection report also mentioned that the main building converted from heating oil to natural gas in 1962. (Attachment E) This means that the underground storage tank (UST) that originally stored the heating oil remained dormant in the ground until 1991 when it was closed by removal. (Attachment F)

A follow-up inspection was conducted by the Suburban Regional Health Commission of East Orange in October, 1982 (Attachment E). The subjects of the inspection were the two degreasers discovered in the initial inspection. Premesco informed the Regional Health

Commission inspector that the degreasers were installed in 1976 and 1979. The two vapor heated degreasers utilized both liquid and vapor phase solvent in each unit. The procedure to clean jewelry involved it's immersion into vapor phased-solvent and then into a liquid-phased solvent. The jewelry was cleaned using ultrasound to limit splashing. The inspectors noted that TCA was used at the time of the inspection but there was no mention of what solvent was used in the past or the methods of waste disposal. The October 1982 inspection predated hazardous waste regulations but did note some deficiencies on the degreaser machines themselves. Concerns centered on the inadequacy of the sides of the machines and their ability to contain splashing or high levels of solvent. Also, there were no machine operating manuals available. A Field Activity Report was prepared for the Suburban Regional Health Commission on October 20, 1982. The same inspector filed a Field Record of Violation form for the NJDEP Division of Environmental Quality, Air Pollution Control Code, also on October 20, 1982. (Attachment E).

SA obtained an NJDEP Hazardous Waste Generator Annual Report Form from 1989 that summarized the wastes disposed at Premesco. The majority of the hazardous waste disposed at the facility was waste Aqua-Regia, but the report also confirmed that 100 gallons of waste TCE were disposed in 1989. The 1982 inspection reports coupled with the 1989 NJDEP Hazardous Waste Generator Annual Report Form confirmed that TCA and/or TCE were used at Premesco at least through 1989. An NJDEP, Division of Hazardous Waste Management Hazardous Waste Inspection Report dated October 29, 1990 indicated that TCA was still being used at the Premesco facility (Attachment G). The inspection determined that Premesco was a generator of hazardous waste and as a result of the inspection, the Department issued an Administrative Order and Notice of Civil Administrative Penalty Assessment to Premrefco Inc. (Attachment H). The penalty assessment was due to a number of violations related to the handling of hazardous waste including the manner in which the Aqua-Regia was stored, the failure of Premesco personnel to perform daily inspections of areas where hazardous wastes were stored, and several administrative violations. These violations were quickly addressed by Premesco. Information obtained from Premesco personnel indicated that the use of TCA stopped by 1992 and the degreasing operations were replaced by soap and water, ultrasonics and steam.

Premesco was inspected by the NJDEP, Bureau of Enforcement and Compliance Services on July 24, 2007. The inspector determined that Premesco was in compliance with applicable Department regulations and/or permit conditions.

SA visited Premesco and Stonco on April 29, 2010. SA walked through the Premesco facility and discovered nothing out of the ordinary. SA also toured the exterior of the facility to determine locations to advance borings for the subsurface investigation.

In May 1992, SA prepared a PA for Premrefco (Attachment B). The report documented the use of TCA and its means of disposal in 55-gallon drums that were shipped off site when filled. The PA documented a drum storage area and a dry well as two possible contaminant source areas and SA incorporated them into the workplan for the 2010 site investigation. SA added a heating oil UST and a sewer waste box as additional areas of concern (AOC).

The first area mentioned in the PA was a small concrete block building with three attached sheds where 55-gallon metal drums containing spent solvents were stored. The sheds were located approximately 235 feet from Vauxhall Road on the southeastern side of the Premesco building (Map 5) immediately adjacent to the Stonco property. The building and sheds were demolished when a third addition was added to the building in approximately 2005. In 2010, the former

location of the shed corresponded to an area of the Premesco building where different colors of brick indicated that an addition had been built. SA positioned a series of soil and ground water samples both hydraulically upgradient and downgradient of the former shed/drum storage area. Because the property line was only ten feet from the Premrefco building, all of the proposed borings to assess the storage shed were located on the adjacent Stonco property. (Map 6)

The second AOC was a system of catch basins and storm drains that surrounded the building on the northeast and the northwestern sides of the building. (Map 5) As illustrated, the drainage system runs toward the southwest from the northern-most corner of the building, crosses the access driveway and terminates into what is described as a dry well on an old site plan of the Premesco facility (Map 7). The dry well is located on the small property adjacent to the Premesco property and owned by ABM. SA did not know what substances could enter the dry well. From exterior observations made by SA prior to the subsurface investigation, it appeared the dry well received only runoff from the drives and parking areas surrounding the Premesco building via storm drains (Map 5). There was no indication of the dry well's exact location other than the single map obtained by SA. However, borings advanced in the area of the suspected dry well met with shallow refusals at two feet bgs indicating that the top of the dry well may have been encountered. Ground water samples collected adjacent to the suspected dry well indicated that it was a probable source of TCE contamination. It is possible that floor drains from the Premesco operations were connected to the storm sewer and waste solvents were discharged directly into the drainage system. It is also possible that wastes solvents dumped directly into the storm sewers ended up in the dry well.

The third AOC is an area where an underground storage tank (UST) was located from the early days of operation at the Premesco facility until its removal in July 1991. The Premesco maintenance supervisor indicated that the 5,000-gallon UST had originally contained heating oil to heat the building. Reportedly, the building switched from oil to gas heat in the early 1960's. The UST was closed and lay dormant for 30 years until it was removed in 1991. A Site Assessment Report prepared by A.W.K. Associates, Inc., a UST contractor, indicated that liquids in the UST were removed during the closure, and there were no holes observed on the tank upon its removal. (Attachment F) The UST was located on the northwestern side of the Premesco building near soil boring TW-3 (Maps 5 and 6). The site assessment report indicated that there had been a minor release of heating oil during the operation of the UST. Since there were no holes observed in the UST, AWK speculated that the contamination resulted from the accumulation of minor product losses during filling operations of the UST. Additional petroleum hydrocarbon (TPH) contamination discovered away from the UST was attributed to a release of heating oil from the piping that connected the UST to the building. Unexpectedly, the highest concentration of TCE (810 ppb) in ground water detected on the Premesco property was in boring TW-3, advanced in the vicinity of the former UST.

The fourth AOC is a waste box located near the front door of the Premesco building facing Vauxhall Road. A Premesco employee stated that the waste box was used to collect waste samples generated from Premesco operations prior to its entering the public sewer along Vauxhall Road. A Premesco site map dated December 2004 indicated that there was a tank cleanout located in the same area as the waste box (Map 5). NJDEP could not confirm if the tank cleanout and the waste box were one and the same or if a label from an earlier base map had been transferred to the 2004 map. A sewer pipe runs underneath the front lawn and connects the building to the sewer main on Vauxhall Road. SA placed two borings to collect ground water

samples on the front lawn of the property in an effort to determine if there may have been a waste discharge at the front of the property either from a septic tank or other waste discharge system. Based upon a TCE concentration of 307 ppb in ground water sample TW-6, located on the front lawn, TCE could have been released to the ground from leakage in the discharge pipe connecting the building to the sewer. A more likely scenario is that the TCE migrated with ground water flow from boring TW-3, located hydraulically upgradient and on the Premesco property. High concentrations of TCE (900 ppb) were also detected in monitoring well MW-23, located within 70 feet and hydraulically downgradient of TW-6. (Map 6)

AOC SUMMARY TABLE

AOC Name	Source Type	CERCLA Exempt	Physical State	Waste Quantity
Hazardous waste storage shed	Other	No	Liquid	Unknown
Surface water drainage system and dry well	Other	No	Liquid	Unknown
Former Underground Storage Tank	Tank	No	Liquid	Unknown
Waste Box	Other	No	Liquid	Unknown

PART III: PERMITS

A. NJPDES

Number	Date Issued	Expiration Date	Formation or Water Body Discharged To
N/A			

B. New Jersey Air Pollution Control Certificates

Plant ID No.: September 1982 NJDEP Air Pollution Control lists the ID as 40049
 No. of Certificates: N/A

Equipment Permitted: N/A

C. BUST Registration

Registration No.: UST was not registered. Closed in 1991.

No. of Tanks: 1

Tank No.	Capacity (gallons)	Contents of Tank	Status
UST A	5,000	Heating oil	Removed in 1991

D. RCRA Status (TSD, Generator, Protective Filer, etc.) N/A

E. Other Permits (RCRA, NRC, etc.)

Issuing Agency	Permit Type	Permit No.	Date Issued	Expiration Date

PART IV: SOIL EXPOSURE

Describe soil type. Include soil series, composition of the soil and permeability of the soil.

The soil type at the site is listed in the Soil Survey of Union County New Jersey as Urban Land.

For each sampling event, identify the sampler and date of sampling and list the name, address and certification number of the lab which performed the analyses. State who conducted the quality assurance review of the data and summarize any data qualifications.

Two sampling events occurred at Premesco during which soil samples were collected. In the first event, soil samples were collected as part of confirmatory sampling during the removal of a UST on the northwestern side of Premesco. The second sampling event was conducted by NJDEP, SA as part of this SI.

The removal of the 5,000-gallon heating oil UST took place in July 1991 (Attachment F). The UST had been in use approximately 8 years from the start of operations in 1954 to the early 1960's and provided #2 oil to heat Premesco. After Premesco switched to natural gas heating in

the early 1960's, the UST lay dormant. After removal of the UST, a fuel oil odor was noticed in the northeastern portion of the excavation prompting the excavation of 20 cubic yards of contaminated soil. Confirmatory sampling of the excavation revealed that TPH at a concentration of 665 ppm was detected in a soil sample TW-9, which was reportedly collected in an area where the feed and return lines for the UST were located. The location of sample TW-9 was not included on the map in the closure report. Because the sample exceeded the NJDEP soil criteria for TPH of 100 ppm, A.W.K. Associates, Inc., the consultants for Premesco, ran a base neutral +15 analysis for the soil sample. W.A.T.E.R. Works Laboratory, Inc. of East Orange New Jersey performed the analysis and the results of the analysis is summarized in the table below

Tabulate sample numbers and the associated Area of Concern or describe the sample location. Identify samples which establish background conditions.

A.W.K Associates, Inc. July 1991 UST Confirmatory Sampling				
SAMPLE #	DEPTH (feet bgs)	CONTAMINANT	CONCENTRATION (ppm)	NJDEP SOIL REMIATION STANDARD (ppm)
TW 1/1	9.0 – 9.5	PHC	ND	100
TW 1/2	9.0 – 9.5	PHC	ND	100
TW2	9.0 – 9.5	PHC	ND	100
TW3	9.0 – 9.5	PHC	ND	100
TW4	9.0 – 9.5	PHC	ND	100
TW5	9.0 – 9.5	PHC	ND	100
TW6	9.0 – 9.5	PHC	ND	100
TW7	9.0 – 9.5	PHC	ND	100
TW8	9.0 – 9.5	PHC	ND	100
TW9	9.0 – 9.5	PHC	665	100
		Indeno (1,2,3-cd) pyrene	0.064 J	2
		Benzo (ghi) perylene	0.054J	30,000
		Phenanthrene	0.130 J	300,000
		Di-n-butyl phthalate	1.900	68,000
		Fluoranthene	0.260 J	24,000
		Pyrene	0.200 J	18,000
		Benzo (A) Anthracene	0.088 J	2
		Chrysene	0.096 J	230
		Benzo (b) fluoranthene	0.280 J	2
		Benzo (a) pyrene	0.160 J	0.2

PHC – Petroleum Hydrocarbon J – Below Method Detection Limit
Soil Remediation Standard – Current (2010) Non Residential Standard
(Attachment F)

Approximately 20 cubic yards of contaminated soil was excavated and disposed off-site.

Confirmatory sampling indicated that one soil sample exceeded the NJDEP Soil Standard (at the time) of 100 parts per million (ppm) for TPH. None of the compounds analyzed for base neutrals +15 exceeded NJDEP Standards although several compounds were detected in low concentrations. None of the soil samples were analyzed for volatile organic compounds (VOCs) and SA is not aware of any follow-up actions by NJDEP after the submission of the UST Site Assessment Report.

The second subsurface investigation at the ABM property and the Premesco site was initiated in September 2010. SA advanced 10 borings from which four soil samples were collected. SA used a Geoprobe duo-core method where soil is retrieved continuously in a clear macro sleeve (tube) and from which a sample is collected. SA described the sediments and screened the soil boring with a TVA organic vapor analyzer. One soil sample was collected from each of the 4 borings at the interval where the highest concentration of organic vapors was detected.

There were no VOCs detected in any of the soil samples. The soil samples were submitted to the USEPA Region 2 Laboratory in Edison, New Jersey and the data was validated by EPA (Map 6) (Attachment K)

Tabulate sample numbers and the associated Area of Concern or describe the sample location. Identify samples which establish background conditions.

Sample ID	Date/Collector	Depth (bgs)	Area of Concern
TW-1S	9/13/10 - SA	8.8 – 8.5	Upgradient Sample - background
TW-3S	9/13/10 - SA	11.0 – 11.5	UST Area – surface dumping?
TW-4S	9/13/10 - SA	12.5 – 13.0	Upgradient of Dry Well
TW-7S	9/10/10 - SA	8.0 – 8.5	Search for septic relic in front

Tabulate contaminants identified in the soil. Include sample number, depth, contaminant levels and corresponding NJDEP Soil Remediation Standard.

Sample ID	Date/Collector	Depth (bgs)	VOC Concentrations
TW-1S	9/13/10 - SA	8.8 – 8.5	ND
TW-3S	9/13/10 - SA	11.0 – 11.5	ND
TW-4S	9/13/10 - SA	12.5 – 13.0	ND
TW-7S	9/10/10 - SA	8.0 – 8.5	ND

ND – Non-detect
(Attachment K)

Discuss contaminants identified in the soil above background and remediation standards and provide the rationale for site attribution. State whether Level 1 or Level 2 contamination is present.

During their investigation in September 2010, SA collected soil samples from four borings and detected no contamination. In 1991, TPH at a concentration of 665 ppm was detected during the closure and removal of a heating oil UST. The current Cleanup Standard for TPH is 10,000 ppm. Based upon these results, a release to soil has not been documented.

Total area of surficial contamination in square feet: N/A

If no soil sampling has been conducted, discuss areas of potentially contaminated soil, areas that are visibly contaminated or results from soil gas surveys.

Soil sampling was conducted.

Number of people occupying residences or attending school or day care on or within 200 feet of the site: <20

Number of workers on or within 200 feet of the site: 150

Number of on-site employees: 150

Identify terrestrial sensitive environments within 200 feet of observed contamination.

None were identified

Determine if any commercial agriculture, silviculture, livestock production or grazing are present within 200 feet of observed contamination.

None were identified.

PART V: GROUND WATER ROUTE

A. HYDROGEOLOGY

Describe geologic formations and the aquifer(s) of concern. Include interconnections, confining layers, discontinuities, composition, hydraulic conductivity and permeability.

Ground water in Union County occurs in the voids of unconsolidated stratified drift deposits of Pleistocene age and in joints and fractures of the Brunswick Formation and Watchung Basalt of late Triassic Age. The Brunswick Formation consists of thin-bedded shale, mudstone and sandstone with color variations of reddish-brown to grey. The reddish-brown color originates from reworked hematite which comprises 5 to 10 per cent of the formation. Minerals of the Brunswick Formation include quartz, illite, muscovite, feldspar and small amounts of calcite and gypsum.

The Watchung Basalt consists of three extensive basaltic lava sheets intercalated with

sedimentary rocks of the Brunswick Formation. Two of the three lava sheets occur in Union County form the First and Second Watchung Mountains.

Unconsolidated sediments deposited by glaciers or glacier melt water during the Pleistocene Epoch mantled the bedrock surface in Union County. These glacial till deposits consist of clay, silt, sand, gravel and boulders of glacial, glaciolacustrine or glacial fluvial origin. Aquifer tests conducted on an adjacent property to Premesco showed that permeability values for the dense glacial till overburden ranged between 10-2 cm/sec and 10-5 cm/sec indicating low permeability.

The Pleistocene sediments in the bedrock channels consist of unstratified and stratified clay, silt, sand and gravel. Only the sand and gravel deposits of the stratified drift will yield large quantities of water to the wells.

The Brunswick Formation of Late Triassic age is the major aquifer in Union County. Water occurs in joints and fractures which become progressively tighter and fewer with increasing depth below land surface. The joint and fracture system in which ground water is stored may intersect each other so that water can move vertically as well as horizontally. Ground water occurs in both confined and unconfined conditions in the Brunswick Formation. Unconfined ground water occurs mainly in upland areas where overlying unconsolidated sediments are thin or absent. In the lowland areas in the southern and eastern portions of Union County, the rocks are mantled by unconsolidated Pleistocene deposits containing silt and clay beds which may confine water in the underlying rocks.

Wells tapping the Brunswick Formation generally draw water from several water-bearing zones. In areas where the rocks are exposed or covered by a thin layer of unconsolidated sediments, the shallow water-bearing zones contain unconfined water to depths between 200 and 300 feet. Wells penetrating to depths between 200 and 600 feet generally have the greatest yields.

A network of approximately 20 monitoring wells was constructed on the adjacent Red Devil property, south-southwest of Premesco (Map 8). The total depths of the shallow monitoring wells range between 30 and 40 feet deep and ground water depths average 23 feet below ground surface (bgs). At several of the monitoring well locations at Red Devil, wells were installed to the top of bedrock. These monitoring wells are designated with a 'D' after the well ID number and they were installed to the top of bedrock. The depth of the deep wells range between 50 and 70 feet bgs and the ground water depths also average 23 feet bgs (Attachment J)

The ground water flow direction calculated from both the shallow and deep monitoring wells is toward the south-southwest from Premesco toward Red Devil and the Hickory Manor Condominiums. Monitoring well MW-23, located on the Vauxhall Road right-of-way and within several feet of the Premesco site, is the most northerly monitoring well and the one farthest hydraulically upgradient relative to the condos. EcoSciences, the consultants for the Red Devil Property, produced a series of ground water flow direction maps from June 2004 to December 2007. Maps were produced for both the shallow and deep monitoring wells and all except the December 2007 ground water elevation maps are included in Attachment J. The December 2007 Shallow Ground Water Elevation Map (Map 9) and the Deep Ground Water Elevation Map (Map 10) are included in the Figures Section.

Depth to water table: 25 feet

Depth to aquifer of concern: 25 feet

Depth from lowest point of waste disposal/storage to highest seasonal level of the saturated zone of the aquifer of concern: to be determined: 0 feet, aquifer is contaminated

Thickness and permeability of the least permeable layer between the ground surface and the aquifer of concern: 5 to 25 feet bgs, 10 – 4 cm/sec (fractured shale)

Thickness of aquifer: 10,000 feet

Direction of ground water flow: south-southwest

Net precipitation Factor Value: 6

Karst: No

Wellhead Protection Area within 4 miles of the site: Yes

Does a waste source overlie a Wellhead Protection Area: No

B. MONITORING WELL INFORMATION

Briefly discuss why the monitoring wells were installed.

There are no monitoring wells installed on the subject property. However, monitoring wells MW-23 and MW-23D are located on the northern right-of-way of Vauxhall Road, but appear to be located on the Premesco property (Map 6). The two monitoring wells are located several feet apart and are screened at separate intervals. Monitoring well MW-23 is screened at the top of the shallow aquifer and MW-23D is screened near the bedrock interface zone. MW-23 was constructed to a depth of 40 feet bgs with 15 feet of screen at its base. Monitoring well MW-23D (deep) was advanced to 66 feet bgs at the top of the bedrock and screened to 56 feet bgs.

The ground water in this interval was isolated to enable sample collection at the top of the bedrock where dense non-aqueous phase liquids such as TCE and TCA tend to accumulate. (Attachment I) The two monitoring wells were installed by EcolSciences, consultants to ARC Union, LLC, the developers of the Red Devil property, to augment existing information and refine the ground water flow direction at Red Devil. Ground water sampling results on their site enabled EcolSciences to conclude that there was an off site source of contamination affecting the ground water quality on the Red Devil property (Maps 9 and 10).

Monitoring wells MW-24 and MW-24D were also installed by EcolSciences for the same purposes as MW-23 and MW-23D. The monitoring wells were installed in the northern right-of-way of Vauxhall Road adjacent to the Stonco property. Monitoring wells MW-24 and MW-24D are ideally positioned to assess ground water quality hydraulically downgradient of three AOCs on the northwestern portion of the Premesco site including the area where the UST was located, the main operations building and the area in which the former hazardous waste storage shed was located. The construction details of the two monitoring wells may also be found in Attachment I.

Monitoring wells MW-25 and MW-25-D were installed by EcolSciences in the main entrance driveway of the Hickory Manor Condominiums, on the southern side of Vauxhall Road. The two monitoring wells are located hydraulically downgradient and approximately 425 feet south of both the dry well on the ABM property and the former UST area on the Premesco property. The two monitoring wells are also located 500 feet south-southwest and hydraulically

downgradient of the hazardous waste storage shed.

The following table summarizes the analysis of ground water samples collected from the six monitoring wells installed by EcolSciences for their investigation of the Red Devil site. The monitoring well locations are depicted on Map 8. The ground water samples were collected in December 2007. (Attachment J)

Tabulate contaminants identified in each well. Include well number, contaminant levels and corresponding NJDEP Ground Water Quality Standard (GWQS).

SAMPLE #	DATE	Screened Interval (feet bgs)	CONTAMINANT	CONCENTRATION (parts per billion)	NJDEP GWQS
* MW-23	12/07	25-40	trichloroethene	900	1
			tetrachloroethene	4.9	1
MW-23D	12/07	56 - 66	1,1-dichloroethene	11	1
			trichloroethene	350	1
* MW-24	12/07	27 - 42	trichloroethene	230	1
			tetrachloroethene	4.0	1
MW-24D	12/07	55 - 65	1,1-dichloroethene	72	1
			cis-1,2-dichloroethene	1.2	70
			1,1,1-trichloroethane (TCA)	16	30
			trichloroethene	240	1
			tetrachloroethene	4.8	1
* MW-25	12/07	27 - 42	trichloroethene	900	1
			tetrachloroethene	7.7	1
MW-25D	12/07	55 - 65	1,1-dichloroethene	98	1
			1,1,1-trichloroethane(TCA)	20	30
			trichloroethene	400	1
			tetrachloroethene	6.4	1

GWQS – Ground Water Quality Standards

Bolded concentrations exceed NJDEP Ground Water Quality Standards

* Only the TCE and PCE concentrations for the shallow monitoring wells, MW-23, MW-24 and MW-25 were available to SA. Because of their relative depths, the 'D' monitoring wells are more comparable to the borings advanced by SA in September 2010. It is likely that the ratios of the other detected compounds in the shallow monitoring wells are similar to those of the deep monitoring wells.

Discuss contaminants identified in the monitoring wells above background and the ground water quality standards and provide the rationale for site attribution. State whether Level 1 or Level 2 contamination is present.

The six monitoring wells in the above table are located hydraulically downgradient of three of the AOCs identified at Premesco. Monitoring wells MW-23 and MW-23D are located immediately adjacent to the Premesco property (Map 6). TCE was detected in both monitoring wells and 1,1-DCE, a breakdown product of TCA, was detected in MW-23D. It is important to remember that the full volatile scan for MW-23 was not available. The presence of 1,1-DCE in MW-23D coupled with the absence of TCA indicates that the release is likely to be older due to the complete biodegradation of TCA. But the low concentration of 1,1-DCE (11 ppb) is an indication that TCA was not released in great quantities in the northwestern area of the site. TCE, with an NJDEP GWQS of 1 ppb, was detected at 900 ppb in MW-23 and 350 ppb in MW-23D.

Waste disposal may have at some time shifted from the northwestern side of the Premesco building, where waste solvents ended up in the dry well structure, to the southeastern side where the hazardous materials storage shed was located. Waste solvents may have been drummed as early as 1975 and stored on the southeastern side of the building. Chlorinated solvents were known to have been used at Premesco up until 1992. Monitoring wells MW-24 and MW-24D are located hydraulically downgradient of the southeastern side of the Premesco building. Analysis of ground water samples collected from MW-24 and MW-24D indicate that both TCE and TCA, along with their breakdown products 1,2-DCE and 1,1-DCE respectively, were detected. TCE, with an NJDEP GWQS of 1 ppb, was detected at 230 ppb in MW-24 and 240 ppb in MW-24D. In MW-24D, 1,1-DCE, with an NJDEP GWQS of 1 ppb, was detected at 72 ppb.

Monitoring wells MW-25 and MW-25D are also located hydraulically downgradient of Premesco. Analysis of ground water samples collected from MW-25 and MW-25D indicate that both TCE and TCA, along with 1,1-DCE were detected. In December 2007, TCE, with an NJDEP GWQS of 1 ppb, was detected at 900 ppb in MW-25 and 400 ppb in MW-25D. In MW-25D, 1,1-DCE, with an NJDEP GWQS of 1 ppb, was detected at a concentration of 98 ppb (Map 8 and 8A).

Since monitoring wells MW-23, MW-23D, MW-24 and MW-24D are located hydraulically downgradient and very close to the Premesco property, it is likely that a release to the ground water of TCE, TCA and their breakdown products is attributable to the site at concentrations exceeding background levels and the NJDEP Ground Water Quality Standards. Level 1 contamination is present.

C. GROUND WATER SAMPLING

Discuss any other ground water sampling that has occurred. For each sampling event, identify the sampler and date of sampling and list the name, address and certification number of the lab which performed the analyses. State who conducted the quality assurance review of the data and summarize any data qualifications.

Between September 8 and September 13, 2010, SA advanced two borings on the ABM property, five borings on the Premesco property and three borings on the neighboring Stonco property to

15

collect soil and ground water samples. The borings were placed to assess the impact of the four AOCs identified at Premesco. The unconsolidated aquifer at Premesco occurs within glacial till sediments and the collection of ground water samples was difficult due to the suspension of fine sediments in the ground water. SA discovered that the most effective method to collect ground water samples was to use 2.5-inch steel geoprobe rods and advance them straight down to a depth of 50 feet. The presence of cobbles and boulders in the till required the use of a powerful Geoprobe 6620 machine. Temporary wells consisting of ten feet of 1 inch well screen and 40 feet of PVC riser were placed inside the geoprobe rods prior to pulling them up in order to expose the screen to the aquifer. The column of ground water accumulating in the temporary wells was typically 10 to 30 feet thick. SA determined that temporary well points set at depths less than 30 feet lacked sufficient ground water infiltration to collect a sample.

The following table summarizes the analysis of ground water samples collected from the ten borings during the Premesco SI. The ground water samples were submitted to the USEPA Region 2 Laboratory. The USEPA Laboratory in Edison, NJ performed the analysis of the samples and the quality assurance review. The ground water samples were analyzed under the titles 'Premrefco #10090021' and 'KCS Lighting Inc #10090014' (Attachment K)

Tabulate sample numbers and the associated Area of Concern or describe the sample location. Identify samples which establish background conditions.

NJDEP, SA - September 2010 Temporary Well Points	
SAMPLE #	ASSOCIATED AOC/SAMPLE LOCATION
TW-1	Background Sample
TW-2	On site, upgradient of former UST
TW-3	On site, within area of former UST
TW-4	ABM, upgradient of Dry Well
TW-5	ABM property, adjacent to and downgradient of Dry Well
TW-6	On site, downgradient of Waste Box and former UST area
TW-7	On site, downgradient of Waste Box
TW-9	Off site, downgradient of PREMESCO operations and Haz Waste Storage
TW-10	Off site, downgradient of Haz Waste Storage
TW-11	Off site, upgradient of Haz Waste Storage

Note: TW-8 could not be collected due to boring refusal at shallow depths.

Tabulate contaminants identified in ground water. Include sample number, contaminant levels and corresponding NJDEP Ground Water Quality Standard (GWQS).

SAMPLE #	SCREEN DEPTH (feet bgs)	CONTAMINANT	CONCENTRATION (ug/L)	NJDEP GWQS (ug/l)
TW-1	38 - 48	No detections	n/a	n/a
TW-2	39 - 49	trichloroethene	38	1
TW-3	39 - 49	trichloroethene 1,1-dichloroethene	810 8.1	1 1
TW-4	35 - 45	trichloroethene 1,1-dichloroethene	8.6 5.1	1 1
TW-5	39 - 49	trichloroethene cis-1,2-dichloroethene 1,1,1-trichloroethane 1,1-dichloroethene tetrachloroethene 1,1,2-trichloro-1,2,2- trifluoroethane (CCF-113)	3,300 31 22 150 13 16	1 70 30 1 1 2,400
TW-6	39 - 49	trichloroethene 1,1,1-trichloroethane 1,1-dichloroethene	390 12 70	1 30 1
TW-7	39 - 49	trichloroethene 1,1,1-trichloroethane 1,1-dichloroethene	50 10 19	1 30 1
TW-9	39 - 49	trichloroethene 1,2-dichloroethane 1,1,1-trichloroethane 1,1-dichloroethene tetrachloroethene	670 5.2 100 310 11	1 2 30 1 1
TW-10	35 - 49	trichloroethene 1,1-dichloroethane 1,1,1-trichloroethane 1,1-dichloroethene	250 5 79 200	1 50 30 1
TW-11	39.5 - 49.5	trichloroethene 1,1,1-trichloroethane	21 240	1 30

SAMPLE #	SCREEN DEPTH (feet bgs)	CONTAMINANT	CONCENTRATION (ug/L)	NJDEP GWQS
SB-7 **	39.5 – 49.5	Trichloroethene	260	1
		Cis-1,2-Dichloroethene	1.8	70
		1,1,1-Trichloroethane	3.5	30
		1,1-Dichloroethene	29.1	1
		1,1-Dichloroethane	0.74	50
		Tetrachloroethene	1.3	1

Bolded concentrations exceed NJDEP Ground Water Quality Standards

** SB-7 is a ground water sample collected on the Stonco Property, using the Stonco nomenclature. It is included in this SI because the TCE detected in SB-7 is likely to have resulted from a release at Premesco.

Discuss contaminants identified in ground water above background and the ground water quality standards and provide the rationale for site attribution. State whether Level 1 or Level 2 contamination is present.

The results of the subsurface investigation indicated that TCE and TCA were detected in ground water samples collected from the Premesco site and the ABM property. The highest concentration of TCE was 3,300 ppb, detected in boring TW-5 located adjacent to and hydraulically downgradient of the dry well on the ABM property. The highest concentration of TCA was 240 ppb, collected in boring TW-11 located adjacent to the former storage shed on the southeastern side of the building (Map 8). In addition, 1,1-dichloroethane (1,1-DCA), a breakdown product of TCA, was detected in several of the ground water samples at concentrations exceeding those of TCA. Cis-1,2-dichloroethene, a breakdown product of TCE, was detected only in the ground water sample collected from boring TW-5, located adjacent to the dry well. The presence of VOC breakdown products in the ground water is indicative of older releases.

It is documented that the operations of Premesco required the use of metal degreasers in the final stages of jewelry making. Prior to 1992, Premesco used TCE and TCA in a final stage of jewelry cleaning. Early site inspection reports confirmed the use of a vapor degreaser at Premesco and it is unclear how the waste solvent generated from the degreaser was disposed. It is known that a system of storm drains was installed around the perimeter of the original building and emptied into an underground retention basin or dry well located on the adjacent ABM property (Map 5). Construction details of the dry well are not known. High concentrations of TCE (3,300 ppb) and 1,1-DCE (150 ppb), the breakdown product of TCA, were detected in a ground water sample collected from boring TW-5 which was advanced adjacent to the dry well. Boring TW-4 was advanced within 10 feet and hydraulically upgradient of the dry well and a ground water sample was collected from the boring. Low concentrations of TCE (8.6 ppb) and 1,1-DCE (5.1 ppb)

18

detected in the ground water sample offered proof that the contamination detected in TW-5 did not result from an off-site, upgradient source. The dry well likely contains high concentrations of chlorinated solvents that were known to have been used at Premesco. SA advanced borings TW-1 and TW-2 upgradient of the Premesco site and the UST AOC and confirmed that contamination was not migrating on site from other sources.

An additional AOC at Premesco was a storage shed used to store hazardous waste solvents. The storage shed was located on the southeastern side of the Premesco facility, near the rear of the Premesco building and was probably constructed in the early 1980's with the 1982 building addition (Map 5). SA advanced borings TW-9, TW-10, TW-11 and SB-7 to collect ground water samples and characterize the ground water conditions south and downgradient of the storage shed. Waste solvents were stored in the shed from the early 1980's to approximately 1992 when the storage shed was mentioned in a 1991 NJDEP Administrative Order and Notice of Civil Administrative Penalty Assessment. (Attachment H) During this time of the Premesco operations, TCA and TCE were both being used. Plant personnel reported that TCA (and TCE) was phased out by 1992 and replaced by soap and water ultrasonics and steam. Ground water concentrations of TCA near the storage sheds suggest that the use of TCA was more prevalent in the southeastern portion of the site as compared to the northwestern portion of the site. But the 1989 Annual Waste Generator Report Form (attachment C) also confirms the use of TCE.

The ground water sampling data from the southeastern side of Premesco allows interpretations to be made. It is interesting to note that the farther TCA contaminated ground water migrated from its source area, the hazardous waste shed, the higher the concentrations of it's breakdown product, 1,1-DCE. A ground water sample collected from boring TW-11, located immediately adjacent to the former storage shed area, showed that TCA was detected at a concentration of 240 ppb and TCE at a concentration of 21 ppb (Map 8 and 8A). There was no 1,1-DCE detected. In a ground water sample collected from boring TW-10, located 130 feet south-southwest of the storage shed, TCA was detected at a concentration of 79 ppb but 1,1-DCE was detected at a concentration of 200 ppb. This is an indication that TCA was released long enough ago to have undergone significant biodegradation. Similarly, in a ground water sample collected from boring TW-9, located 250 feet southwest of the storage shed, TCA was detected at a concentration of 100 ppb and 1,1-DCE was detected at a concentration of 310 ppb. The concentrations of TCE in both TW-10 and TW-9 both increased to 250 ppb and 670 ppb respectively because both borings intersected the contaminant plumes resulting from the AOCs located on the northwestern portion of the Premesco site.

Based upon these results, a documented release of TCE and 1,1-DCE to ground water attributable to the site has been confirmed. Level 1 contamination attributable to Premesco was detected in the unconsolidated aquifer.

D. POTABLE WELL INFORMATION

Distance to nearest potable well: > 1 mile. Information obtained by SA indicates that the closest potable well is more than a mile from the site. This information is based upon a Site Investigation report prepared for the Durex Inc. site located approximately 1,000 feet southwest of the PREMESCO site. (Attachment L)

Depth of nearest potable well: 130 feet

Identify all public supply wells within 4 miles of the site and tabulate for each aquifer the population utilizing that aquifer for drinking purposes. Include only those populations which utilize wells that have a potential to be impacted, not wells which are actually impacted. Do not list private potable wells individually in this table, but include populations served by these private wells. (Attachment Water Dept. Summary and Map 9 DEP Radius Map)

The **South Orange Water Department** operates one well which is located between two and three miles from the site. The well draws from the Brunswick Formation and serves 16,924 residents.

The **Orange City Water Company** operates five wells within four miles of the site, all drawing from glacial sands and gravel of the Quaternary Stratified Drift. According to NJDEP research, the Orange City Water Company operates a total of seven wells and serves 33,000 residents. Approximately 4,714 people are served per well and the five wells within four miles of the site serve 23,570 people.

The **New Jersey American – Raritan Water System** serves a total population of approximately 609,325. Approximately 92% of its delivered water is obtained from surface water while the remaining 8% is supplied from approximately 80 wells drawing from the glacial sands and gravel of the Quaternary Stratified Drift and the Brunswick Formation. The approximate number of people served per well is 609. This water system operates 23 wells located within four miles of the site and they serve a total of 14,007 people. Seven wells draw from the stratified drift and 16 wells draw from the Brunswick Formation.

The **New Jersey American – Short Hills Water System** serves a total population of approximately 217,230. Approximately 92% of its delivered water is obtained from surface water while the remaining 8% is supplied from approximately 23 wells drawing from the Brunswick Formation. The approximate number of people served per well is 756. This water system operates two wells located within two miles of the site serving a total of 1,512 people. The two wells are 100 feet deep and draw water from glacial sands and gravel of the Quaternary Stratified Drift.

Totals

Distance from Site (Miles)	Number of wells	Population Totals	Aquifer
1.0 mile – 2.0 mile	20	12,474	*
2.0 mile – 3.0 mile	7	36,998	*
3.0 mile – 4.0 mile	4	6,541	*

(Attachment M)

Total 56,013

- * Wells in Quaternary Stratified Drift - 14
- Wells in the Brunswick Formation - 17

State whether ground water is blended with surface water, ground water or both prior to

distribution:

Ground water is blended with surface water at the New Jersey American Raritan Water System and the New Jersey American Short Hills Water System (Attachment M)

Discuss private potable well use within 4 miles of the site. Include depth, formation and distance, if available.

There are no potable domestic wells in use in the Boroughs of Kenilworth, Roselle, Hillside and the Township of Maplewood. The Township of Cranford has one domestic well of unknown depth in use and the Township of Springfield maintains records for two wells, also of unknown depth. Union Township has 11 domestic wells ranging in depth between 100 and 400 feet. The closest known potable well is more than 1 mile from the site.

Discuss the site's source of potable water.

The site receives water from the New Jersey American – Raritan Water System. (Attachment M)

Discuss information concerning the population utilizing wells that are known to be contaminated with hazardous substances which are attributable to the site. Also include any other evidence of contaminated drinking water or wells closed due to contamination. State whether Level 1 or Level 2 contamination is present.

There are no known potable wells contaminated with hazardous substances that are attributable to the site.

The subsurface investigation at Premesco was conducted to determine if the ground water under the site was impacted by chlorinated solvents. Potential contaminant sources were investigated due to the detection of high concentrations of TCE in the indoor air of the Hickory Manor Condominiums. The area in which the condos were constructed was formerly the site Harvard Industries, a large industrial complex. Harvard Industries through the course of its many years of operation, generated its own wastes and subsequently impacted the subsurface (Attachment O). The use of chlorinated solvents including TCE was documented at Harvard Industries and TCE was the primary contaminant of concern in the ground water at Harvard Industries. After many years of investigating their own environmental problems, the Amerace Corporation Division of Harvard Industries former Elastic Stop Nut of America facility went through ISRA (Case #E88A66) and was eventually granted an NFA from the Department in May 1999 (Attachment D). The basis of the NFA was that the soil and ground water were remediated to the satisfaction of the Department and that Harvard Industries had successfully argued that the ground water contamination at Harvard Industries resulted from an upgradient source.

The Harvard Industries industrial complex was demolished and hauled away. Having received the NFA for the site, the developer Hovnanian at Union Township I, was brought in and the condos, consisting of several multi-unit buildings, were built. In the mid 2000's it was discovered that the indoor air concentration of TCE exceeded the Rapid Action Levels of the

NJDEP Guidance Document. Sub slab vapor recovery units were installed on the condo units.

Identify any resource uses of ground water within 4 miles of the site (i.e., commercial livestock watering, ingredient in commercial food preparation, supply for commercial aquaculture, supply for major or designated water recreation area, excluding drinking water use, irrigation of commercial food or commercial forage crops, unusable).

There are numerous industrial and irrigation wells in the vicinity of the site. The irrigation wells are operated by several different golf courses. Tuscan Dairy Farms, Inc operates three wells between 2 and 3 miles from the site. There are no commercial wells within 1 mile of the site. (Attachment L, Map 11)

Name	Distance (miles)	Depth (feet)	Formation
Baltusrol Golf Club	3.0	203	Brunswick
Baltusrol Golf Club	3.0	288	Brunswick
Baltusrol Golf Club	3.9	515	Brunswick
Tuscan Dairy Farms Inc.	2.3	300	Brunswick
Tuscan Dairy Farms Inc.	2.3	620	Brunswick
Tuscan Dairy Farms Inc.	1.4	200	Brunswick
Suburban Golf Club	1.7	250	Brunswick
Suburban Golf Club	1.7	500	Brunswick

(Attachment L)

PART VI: SURFACE WATER ROUTE

A. SURFACE WATER

Does a migration pathway to surface water exist? No contamination in first two feet of soil.

Flood plain: Site is not in a flood plain

Size of drainage area for sources at the site in acres: <1

2-year, 24-hour rainfall in inches: 3.4 (Attachment N)

Does contaminated ground water discharge to surface water? Unknown

Identify known or potentially contaminated surface water bodies. Follow the pathway of the surface water and indicate all adjoining bodies of water along a route of 15 stream miles.

Surface Water Body	Distance from Site (miles)	Flow (cfs)	Usage(s)
Unknown Tributary to Rahway River	0.21	<10	Primary and secondary contact recreation, fishing
Unknown Tributary to Rahway River	1.06	10	recreational fishing
Rahway River	1.29	10 - peak flow of 40	Most areas unsuitable for primary and secondary contact recreation, no swimming, fishing
Surface Water Intake on Rahway River Lake	12.74		Stocked w/ trout

Identify drinking water intakes and fisheries within 15 miles downstream (or upstream in tidal areas) of the site. For each intake or fishery identify the distance from the point of surface water entry, the name of the fishery and/or supplier and population served.

There is a surface water intake approximately 12.74 miles downstream of the site on or near the Rahway River Lake. It is a public community well operated by the Rahway Water Department and serves 26,000 people with a 5.5 million gallons/day withdrawal rate. Most of the Rahway River is designated as fresh water non-trout but there have been recent efforts to stock the river with trout.

Discuss surface water and/or sediment sampling conducted in relation to the site. Include surface water body, sampling date, sampling agency or company. State whether Level 1 or Level 2 contamination is present for surface water. State whether Level 2 contamination of sediments is present. For each sampling event, list the name, address and certification number of the lab which performed the analyses. State who conducted the quality assurance review of the data and summarize any data qualifications. Discuss visual observations if analytical data are not available (include date of observation).

No sampling was conducted.

Determine if a contaminant on site displays bioaccumulative properties. Identify all

bioaccumulative substances that may impact the food chain.

No such contaminants were detected.

Determine if surface water is used for irrigation of commercial food or commercial forage crops, watering of commercial livestock, commercial food preparation or recreation.

No surface water near the Premesco site is used for the irrigation of commercial food or forage crops, watering of commercial livestock or commercial food preparation.

B. SENSITIVE ENVIRONMENTS

Identify all sensitive environments, including wetlands, along the 15 stream-mile pathway from the site:

Since the release of contaminants occurred in the subsurface, a surface water pathway was not evaluated. MAP 12 identifies wetlands located within 4 miles of the site. The Premesco Property is located within 500 feet of the 500-Year Flood Boundary (Map14). Other than a catastrophic rain event, flooding is not a concern at Premesco.

C. LIKELIHOOD OF RELEASE

Discuss the likelihood of a release of contaminant(s) to surface water, include any additional information concerning the surface water route. Identify contaminants detected and provide a rationale for attributing them to the site. Identify any intakes, fisheries and sensitive environments, listed above, that are or may be actually contaminated by hazardous substances attributed to an observed release from the site.

Since the contaminant release was to the subsurface, it is unlikely that the surface water pathway of the site was impacted.

PART VII: AIR ROUTE

A. POPULATION AND SENSITIVE ENVIRONMENTS

Identify populations residing within 4 miles of the site. MAP 12

Distance (miles)	Population
on site	150 workers
> 0 - 1/4	646
> 1/4 - 1/2	4,771
> 1/2 - 1	19,923
> 1 - 2	60,639
> 2 - 3	111,253
> 3 - 4	190,901

Identify sensitive environments and wetland acreage within 4 miles of the site.

Distance	Type of environment
0 - 1/4	Forested wetlands and fresh water marshes
> 1/4 - 1/2	Forested wetlands and fresh water marshes
> 1/2 - 1	Forested wetlands and fresh water marshes
> 1 - 2	Forested wetlands and fresh water marshes
> 2 - 3	Forested wetlands and fresh water marshes
> 3 - 4	Forested wetlands and fresh water marshes

MAP 11

B. LIKELIHOOD OF RELEASE

Describe the likelihood of release of hazardous substances to air. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For an observed release, discuss the supporting analytical evidence and its significance relative to background.

SA conducted a file review at the Union Township building and interviewed Premesco personnel in April 2010. Files in the township building indicated that in 1984 there were employee complaints concerning smoke and haze in the building. In 1988, the adjacent Stonco property complained about brown smoke and an acrid odor coming from Premesco. A problem with one of their air scrubber units was discovered and Premesco had it corrected. In 1999, Premesco was issued a fine related to the operation of an air scrubber.

Premesco currently operates as a Minor Source and has five air permits covering different phases of their operations. There is currently no threat of release to ambient air from this site.

If a release to air is observed or suspected, determine the number of people that reside within the area of air contamination.

A release to air was neither observed nor suspected.

If a release to air is observed, identify any sensitive environments that are located within the area of air contamination.

A release to air was neither observed nor suspected.

PART VIII: REMOVAL ACTION AND/OR IEC CONDITION

Discuss conditions which constitute an Immediate Environmental Concern (IEC) or warrant EPA Removal Action consideration (improper storage of incompatible/reactive materials, leaking or unsound containers, inadequate site security, subsurface gas threat).

High concentrations of TCE detected in the vicinity of the dry well located on the ABM property is likely an indication that a significant amount of contamination remains in the dry well. Since this material is being improperly stored, the dry well has the potential of being an ongoing source of a TCE plume hydraulically downgradient towards an area that includes the Hickory Manor Condominiums.

Based upon current NJDEP guidance regarding indoor air, it is possible that the site building itself may be impacted by vapor intrusion from the significant concentrations of chlorinated solvents detected in the shallow aquifer. Indoor air samples should be collected inside the Premesco building to ensure that indoor air contaminant concentrations are within NJDEP guidelines. The detection of TCE at a concentration of 810 ppb in a ground water sample located upgradient of a large portion of the building is a cause of concern for indoor air quality.

PART IX: CONCLUSIONS AND RECOMMENDATIONS

Premesco has manufactured ring sets and other jewelry at its 2389 Vauxhall Road Facility in Union, New Jersey from 1954 to the present. In 1982, Premesco purchased Premrefco, a

company that refined scrap precious metals, and moved it into the Vauxhall Road facility where it continues to operate today. As the business grew, three additions to the original structure were added in 1975, 1982 and 2004. A.B.M. Investment Company also operates from within the facility and is also known as Tessler and Weiss. ABM is the owner of a small property located adjacent to Premesco and across its access driveway.

Premrefco is a large quantity generator of hazardous waste and in 1989, 13,545 gallons of hazardous materials were manifested. Out of the total material manifested, 12,950 gallons consisted of Aqua-Regia which is a mixture of Hydrochloric and Nitric Acid used to dissolve gold scraps. Other materials manifested included waste Methyl Ethyl Ketone, waste oil, waste chromic acid solution and 100 gallons of waste TCE. Premrefco's current waste stream consists primarily of Aqua-Regia.

Use of both TCE and TCA has been documented at the Premesco facility. Inspections by the Suburban Regional Health Commission of East Orange, New Jersey as early as 1982 noted the use of TCA in a 20 gallon vapor degreaser. Inspectors were told that the degreaser tanks were installed in 1976 and 1979. A Generator Inspection Report prepared by the NJDEP Division of Hazardous Waste Management in 1990 also referred to the use of TCA. The two chlorinated solvents were used to degrease jewelry in one of the cleaning steps. Discussions with current plant personnel revealed that the plant operations ceased using TCE and TCA in approximately 1992. The cleaning step requiring solvents was replaced with one using soap and water, ultrasonics and steam.

Although documented use of solvent degreasers extends back to 1976, it is likely that solvents were used prior to that time because of their accepted use prior to environmental regulations in 1982. The method of waste disposal prior to 1982 is not known. Plant operators were unable to offer insights as to early disposal methodology and written documentation could not be obtained.

Premrefco/Premesco was investigated because of chlorinated solvent contamination discovered in the ground water hydraulically downgradient of their facility. Located immediately downgradient is the former Red Devil Manufacturing Facility and the Amerace Corporation Division of Harvard Industries. During a period spanning the 1960's to the late 1990's, ground water contamination was discovered at both Harvard Industries and Red Devil. Harvard Industries, based on its downgradient position relative to Red Devil, was able to convince NJDEP that their ground water contamination resulted from operations at Red Devil in spite of documented use of chlorinated solvents on their own property. Red Devil also had discovered releases of TCE from their own operations. After installing more than 30 monitoring wells to investigate ground water contamination, Red Devil discovered significant TCE contamination in a hydraulically upgradient monitoring well relative to their area of release and located near the Premrefco/Premesco Property. In December 2007, consultants for Red Devil installed two nested monitoring wells, MW-23 and MW23D in the northern right-of-way of Vauxhall Road, located several feet from the Premesco property line. Upon analysis of a ground water sample collected from monitoring well MW-23, the shallow well, TCE was detected at a concentration of 900 ppb, exceeding the NJDEP Ground Water Quality Standard of 1 ppb. Consultants for Red Devil constructed a ground water contour map including MW-23 and determined that the Premesco property was indeed located hydraulically upgradient of Red Devil and that Premesco was likely responsible for ground water contamination on both the Red Devil and the Harvard Industries Property. Having received a No Further Action designation in relation to

their contamination issues, Harvard Industries was demolished and the Hickory Manor Condominiums were built on the cleared land in the early 2000's.

NJDEP, SA was tasked to conduct a Site Investigation on the Premesco Facility and preliminary work began in early 2010. File review information confirmed that chlorinated solvents were used at Premesco, but information concerning their disposition was not available. A Preliminary Assessment Report prepared by SA in 1992 contained a map that indicated the presence of a dry well structure on the ABM property located immediately adjacent to the Premesco property. The map diagrammed a system of storm drains connected by pipes that had been installed on the perimeter of the Premesco facility. All of the storm drains eventually discharged into the dry well. The Preliminary Assessment Report also indicated that three sheds used to store drummed waste had been located on the southeastern side of the Premesco Facility. It is believed by SA that use of the sheds began in the early 1980's and ended when they were demolished when the final addition was built in 2004. SA added these two Areas of Concern to a former UST location and a waste box located in the front lawn.

The subsurface investigation began in September 2010 with the advancement of ten soil borings by SA. Soil samples were collected from four of the borings. Analysis of the soil indicated that there were no Volatile Organic Compounds detected. Ground water samples were collected from all ten borings at a depth close to 50 feet, proximal to the bedrock surface.

SA collected a ground water sample from a position hydraulically downgradient of the dry well and analysis of the sample revealed TCE at concentration of 3,300 ppb, 1,1-Dichloroethene at 150 ppb and PCE at 13 ppb. Each of the three compounds have NJDEP Cleanup Standards of 1 ppb. A ground water sample collected hydraulically upgradient of the dry well had a TCE concentration of 8 ppb. It was clear that the dry well was a source of ground water contamination.

The analysis of a ground water sample collected along the northwestern side of the building in the vicinity of a former UST indicated a TCE concentration of 810 ppb. The source of this TCE could not be definitively determined, but it is likely it resulted from either a subsurface release from a septic system or from surface dumping. Evidence of either was not discovered and the construction of the building additions may be the reason.

SA advanced three soil borings along the southeastern side of the Premesco building to assess the ground water in the vicinity of the former hazardous waste storage sheds. Because the Premesco building is located within ten feet of their property line, the borings had to be collected on the adjacent Stonco property. Analysis of the ground water samples collected in the vicinity of the former sheds indicated TCE concentrations ranging from 21 ppb to 250 ppb to 670 ppb as the boring locations increased in distance from the shed. TCA concentrations, which were low on the northwestern side of the facility, ranged between 240 ppb to 79 ppb to 100 ppb; again as distance increased from the shed.

The knowledge that TCA was used in the latter stages of solvent use at Premesco, is an indication that the drum storage areas were used to stage waste TCA and waste TCE. The lack of TCA in the northwestern portion of the Premesco Facility may represent an older release and allows the likelihood that TCE was used in the earlier stages of operations that predated the drum storage sheds. While the pathway of the TCE to the ground water is not known, its presence in the dry well lends credibility to the idea that the release of TCE is somehow related to the perimeter storm piping.

Due to its history of using chlorinated degreasers and the detection of a significant source of TCE in a septic artifact on its property and significant concentrations of TCE in the ground water proximal to two additional areas of concern, Premesco (ABM, Premrefco and Tessler and Weiss) is a source of the contamination not only on their own property, but also at the Red Devil property and the Hickory Manor Condominiums.

Premesco and its affiliates should comply with N.J.A.C. 7:26E 4.4, Remedial Investigation of Ground Water. A soil gas survey should be conducted in the Premesco facility.

Because the exact nature of the dry well is not known, careful excavation and assessment of its contents is recommended. If there are significant quantities of chlorinated solvents in the dry well, they should be removed and properly disposed. An evaluation of the competency and structure of the dry well should be made to determine its suitability as a storm water control device.

The HRS score for this site is greater than 28.5; therefore, the site is assigned a higher priority for further action under CERCLA.

Submitted by: Steven Hoke
Title: Senior Geologist
NJDEP, Bureau of Environmental Measurements and Site Assessment
Date: 03/08/11

PART X: POTENTIALLY RESPONSIBLE PARTIES

NAME	OWNER/OPERATOR/ KNOWN DISCHARGER	CURRENT ADDRESS
Premrefco/Premesco	Owner, Operator and suspected discharger	2389 Vauxhall Road Union Township, New Jersey Phone: Company Contact – Tom Stier - 908 686-0513

Attachment Q

SITE INVESTIGATION REPORT

PART I: GENERAL INFORMATION

Site Name: Durex Inc.
Address: 5 Stahuber Avenue
Municipality: Union State: New Jersey Zip Code: 07083
County: Union
EPA ID No.: NJD002155943
Block: 5009 Lot(s): 2
Latitude: 40° 42' 27.5" Longitude: 74° 16' 54"
USGS Quadrangle: Roselle
Acreage: 5.093 SIC Code: 3469

Current Owner: Durex Inc.
Mailing Address: 5 Stahuber Avenue
City: Union State: New Jersey Zip Code: 07083
Telephone No.: 908-688-0800

Current Operator: Same
Mailing Address:
City: State: Zip Code:
Telephone No.:

Owner/Operator History:

NAME	OPERATOR/ OWNER	DATES	
		FROM	TO
EREE Realty, L.L.C. (EREE)	Tenancy in common interest	1999	Present
Durex Inc.	Owner	1977	Present
Durex Inc.	Operator	1973	Present
Elastic Stop Nut Corporation of America	Owner	1941	1977
Elastic Stop Nut Corporation Of America	Operator	1941	1973

Durex leased the facility from 1973 until 1977 when the parcel was purchased. Aerial photographs indicate that the surrounding land use was predominantly agriculture until 1940.

the name, address and certification number of the lab which performed the analyses. State who conducted the quality assurance review of the data and summarize any data qualifications.

No ground water samples have been collected on site as part of the Site Investigation or Remedial Action Work Plan.

D. POTABLE WELL INFORMATION

Distance to nearest potable well: 1.6 miles

Depth of nearest potable well: 130 feet

Identify all public supply wells within 4 miles of the site:

Water Company	Distance from Site (miles)	Depth (feet)	Formation
New Jersey American Water Co.	3.7	136	Qsd
New Jersey American Water Co.	1.8	85	Qsd
New Jersey American Water Co.	1.8	85	Qsd
New Jersey American Water Co.	1.8	85	Qsd
Elizabethtown Water Co.	3.6	454	Trb
Elizabethtown Water Co.	3.6	572	Trb
Elizabethtown Water Co.	3.4	315	Trb
Elizabethtown Water Co.	2.4	402	Trb
Elizabethtown Water Co.	1.6	130	Trb
East Orange City	3.7	128	Trb
South Orange Township	2.4	182	Trb
South Orange Township	3.1	304	Trb
South Orange Township	2.4	382	Trb
South Orange Township	2.4	349	Trb
South Orange Township	3.2	200	Trb

South Orange Township	2.6	350	Trb
South Orange Township	3.0	343	Trb
South Orange Township	3.0	500	Trb
South Orange Township	1.9	200	Trb
South Orange Township	1.9	196	Trb
Orange City	2.5	113	Qsd
Orange City	2.7	76	Qsd
Orange City	2.9	94	Qsd
Orange City	2.2	104	Qsd
Orange City	3.5	132	Qsd

Trb - Triassic Brunswick Formation
Qsd - Quaternary Stratified Drift

State whether ground water is blended with surface water, groundwater or both prior to distribution: Ground water is blended with both surface water and some ground water purchased in bulk from other municipalities prior to distribution.

Discuss private potable well use within 4 miles of the site. Include depth, formation and distance, if available.

There are no potable domestic wells in use in the Borough of Kenilworth, Roselle, Hillside and the Township of Maplewood. The Township of Cranford has one domestic well of unknown depth in use and the Township of Springfield maintains records for two wells, also of unknown depth. Union Township has eleven domestic wells ranging in depth from 100 to 400 feet.

Discuss the site's source of potable water.

The Elizabethtown Water Company supplies potable water to the entire City of Union.

Discuss information concerning the population utilizing wells that are known to be contaminated with hazardous substances which are attributable to the site. Also include any other evidence of contaminated drinking water or wells closed due to contamination. State whether Level 1 or Level 2 contamination is present.

Potable wells owned by the Elizabethtown Water Company within 4 miles of the site have been closed due to contamination with volatile organic compounds. (Attachment Q)

Tabulate for each aquifer the population utilizing that aquifer for drinking purposes within 4 miles of the site. Include only those populations which utilize wells that have a potential to be impacted, not wells which are actually impacted.

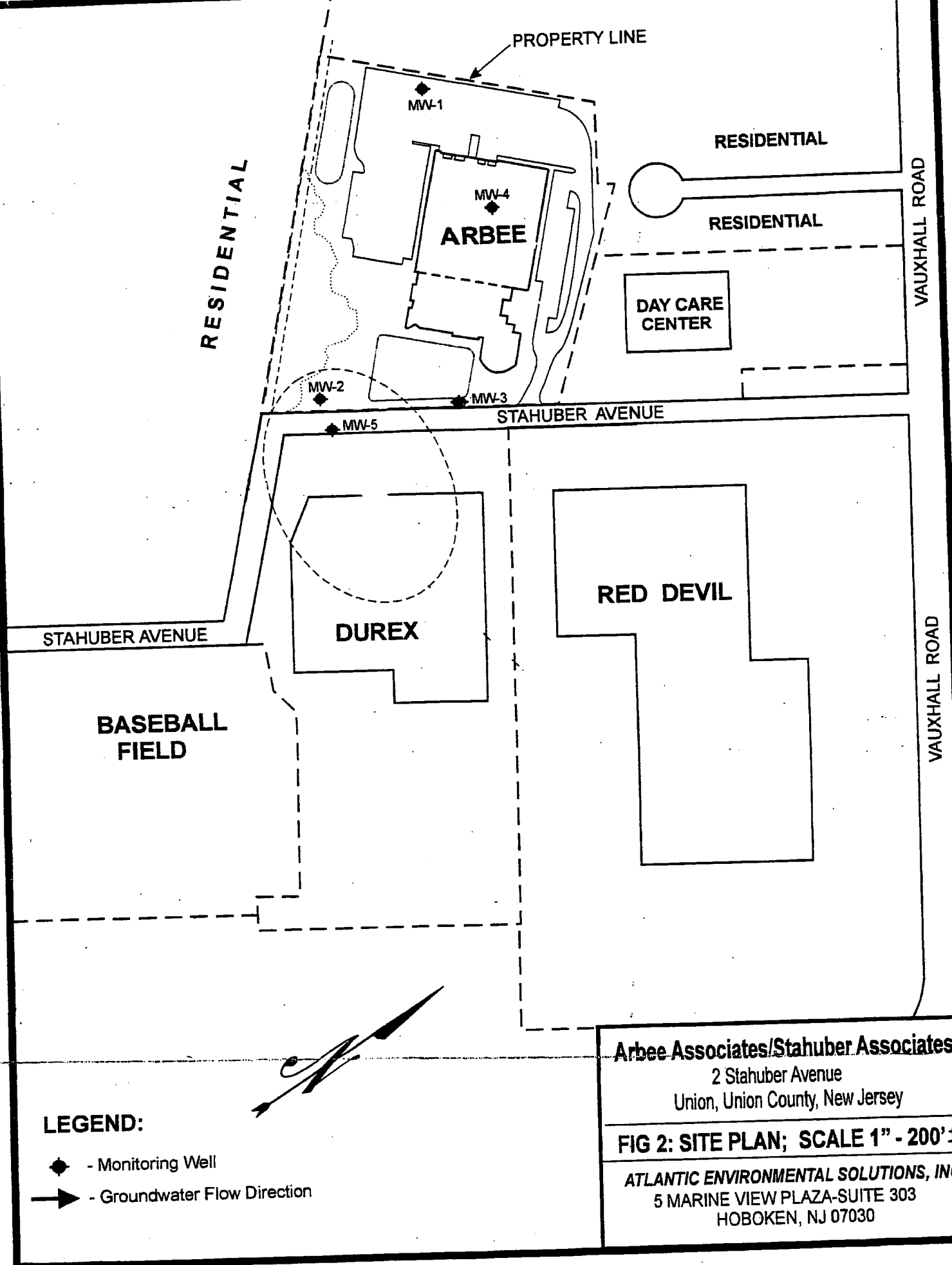
Distance from site (miles)	Population/Aquifer		
	Trb	Qsd	
0 - 1/4	0	0	
> 1/4 - 1/2	35	0	
> 1/2 - 1	5	0	
> 1 - 2	3,000	3,200	
> 2 - 3	6,500	27,500	
> 3 - 4	7,900	10,200	

Trb - Triassic Brunswick Formation
Qsd - Quaternary Stratified Drift

Identify any resource uses of ground water within 4 miles of the site (i.e., commercial livestock watering, ingredient in commercial food preparation, supply for commercial aquaculture, supply for major, or designated water recreation area, excluding drinking water use, irrigation of commercial food or commercial forage crops, unusable).

NAME	DISTANCE (miles)	DEPTH (feet)	FORMATION
Balusrol Golf Course	2.8	203	Trb
Balusrol Golf Course	2.8	288	Trb
Balusrol Golf Course	3.6	515	Trb
Echo Lake Country Club	3.5	80	Trb
Suburban Golf Course	1.8	585	Trb
Maplewood Country Club	1.2	298	Trb

Trb - Triassic Brunswick Formation



SUBJECT TO REVISION

100,000 GPD WATER
WITHDRAWAL POINTS ONLY
AND NJGS CASE INDEX
SITES WITHIN
5.0 MILES OF:

LATITUDE 404230
LONGITUDE 741640

DRAFT

SCALE: 1:63,360
(1 Inch = .15 Mile)

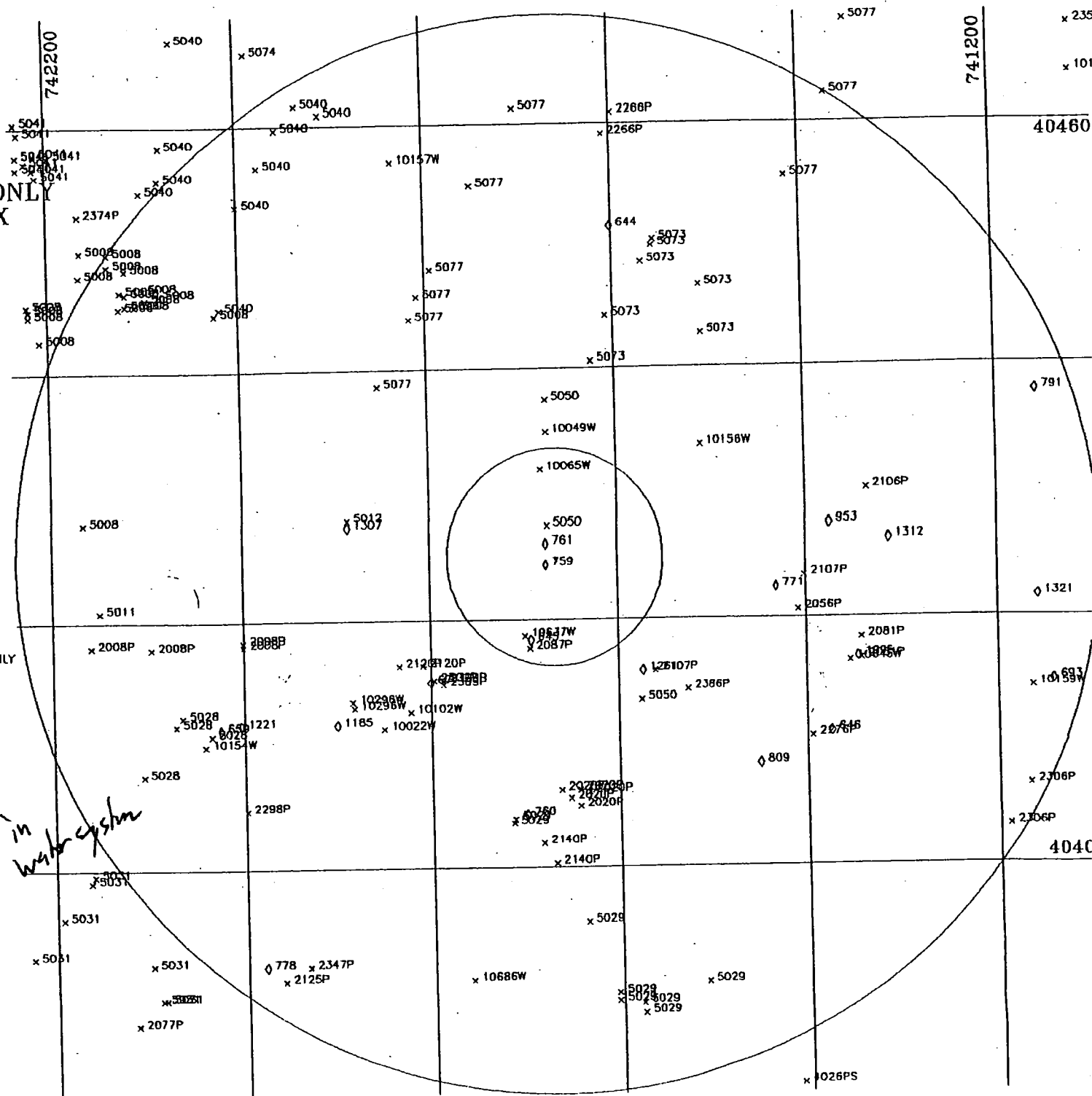
x 100,000 GPD WATER WITHDRAWAL POINTS ONLY
o NJGS CASE INDEX SITES
1 MILE AND 5 MILE RADII INDICATED

NJGS CASE INDEX DATA RETRIEVED FROM:
NEW JERSEY GEOLOGICAL SURVEY
ON 12/22/87

PLOT PRODUCED BY:
NJDEP
WATER TECHNICAL PROGRAMS
BUREAU OF WATER ALLOCATION
CN-029
TRENTON, NJ 08625

DATE: 05/20/92

SUBJECT TO REVISION



NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
10022W	ATLANTIC METAL PRODUCTS INC	2605106	#1	404108	741830	T	2.2	39	17	308	GTRB		100
10049W	MAPLEWOOD COUNTRY CLUB	2602808	1	404330	741645	T	1.2	13	11	60	GTRB		500
10065W	UNION TWP. BD. OF ED.	2602957	#1	404312	741649	T	0.8	39	19	208	GTRB		100
10102W	ACCURATE BUSHING CO., INC.	2604596	#1	404116	741813	T	2.0	39	19	250			
10154W	STERLING PLASTICS CO.	2513805	#2	404100	742025	T	3.7	39	10	590	GTRB		215
10156W	NJ TRANSIT BUS OPERATIONS INC.	2601258	#1	404323	741506	T	1.7	13	11	600			115
10157W	SAINT BARNABAS MEDICAL CENTER	2602327	1	404542	741820		4.0	13	10	819	GTRB		120
10159W	M. POLANER, INC.	2604164		404126	741139		4.6	13	18	399	GTRB		275
10195W	COLUMBUS HOSPITAL	2604664	#1	404622	741110	T	6.5	13	14	354	GTRB		160
10296W	PUBLIC SERVICE ELECT. & GAS CO	2600510	1	404121	741850		2.3	39	17	380	GTRB		75
	PUBLIC SERVICE ELECT. & GAS CO	2600596	2	404118	741849		2.3	39	17	404	GTRB		125
10637W	INTERNATIONAL PAINT (U.S.A.)	2618901	RW-1	404152	741700	T	0.8	39	19	30	GOGL		100
10645W	RONALD MARK ASSOCIATES	2600237	1	404139	741333	T	2.9	39	07	379	GTRB		100
10686W	CONSTRUCTION SPECIALTIES, INC.	2601718	1	403905	741736		4.0	03	39	200	GTRB		80
2008P	BALTUSROL GOLF CLUB	4500303	1	404150	742000	M	3.0	39	17	203	GTRB		200
	BALTUSROL GOLF CLUB	4500304	3	404148	742000	M	3.0	39	17	288	GTRB		300
	BALTUSROL GOLF CLUB	4500305	4	404147	742058	M	3.9	39	17	515	GTRB		90
	BALTUSROL GOLF CLUB	2509639	5	404148	742136	M	4.4	39	17	626	GTRB		120
	SCHERING CORPORATION K-2-1/F29	4600076	1	404038	741626	F	2.2	39	08	470	GTRB		460
2020P	SCHERING CORPORATION K-2-1/F29	2600438	3	404037	741620	F	2.2	39	08	405	GTRB		400
	SCHERING CORPORATION K-2-1/F29	2605532	4A	404030	741626	F	2.3	39	08	550	GTRB		450
	SCHERING CORPORATION K-2-1/F29	2605849	5	404038	741638	F	2.1	39	08	500	GTRB		450
	SCHERING CORPORATION K-2-1/F29	2626568	2	404034	741632	F	2.2	39	08	620	GTRB		278
2056P	ATLAS TOOL COMPANY, INC.	2601171		404204	741405		2.3	39	07	138	GTRB		200
	ATLAS TOOL COMPANY, INC.	2602079		404204	741405		2.3	39	07	300	GTRB		200
2077P	LORD & TAYLOR	2510521	1	403844	742110	F	5.8	39	20	600	GTRB		240
2081P	CERTIFIED PROCESSING CORP.	4600094	1	404140	741326	F	3.0	39	07	202	GTRB		100
	CERTIFIED PROCESSING CORP.	2600265	2	404150	741326	F	2.9	39	07	630	GTRB		250
	CERTIFIED PROCESSING CORP.	2604624	3	404140	741326	F	3.0	39	07	250	GTRB		
2087P	HARVARD IND. SEE 9063	4600003	1	404146	741657	U	0.9	39	19	408	GTRB		150
	HARVARD IND. SEE 9063	4600004	2	404146	741657	U	0.9	39	19	405	GTRB		150
	HARVARD IND. SEE 9063	2600614	3	404146	741657		0.9	39	19	503	GTRB		150
2106P	JERSEY PLASTIC MOLDERS, INC.	2604728	2	404301	741322		2.9	13	09	330	GTRB		320
2107P	TUSCAN DAIRY FARMS INC	4600102	1	404221	741401		2.3	39	19	300	GTRB		250
	TUSCAN DAIRY FARMS INC	2604886	2	404221	741401		2.3	39	19	620	GTRB		350
	TUSCAN DAIRY FARMS INC	2604607	4	404135	741537		1.4	39	19	200	GTRB		450
2120P	TELEDYNE ADAMS	2600479	1	404138	741820	F	1.8	39	19	250	GTRB		150
	TELEDYNE ADAMS	2604432	2	404138	741805	F	1.6	39	19	300	GTRB		200
2125P	LERMER PACKAGING CORPORATION	2602649	WELL #1	403905	741936		4.7	39	26	300	GTRB		200
2140P	ROTARY PEN CORPORATION	2602601	1	404012	741650		2.6	39	08	405	GTRB		60
	ROTARY PEN CORPORATION	2602831	2	404002	741642		2.8	39	08	402	GTRB		105
2266P	ROCK SPRING CLUB	4600167	1	404555	741605	F	4.0	13	22	406	GTRB		76
	ROCK SPRING CLUB	2601607	2	404555	741605	F	4.0	13	22	750	GTRB		50
	ROCK SPRING CLUB	LAKE		404605	741559	S	4.2	13	22		GTRB		500
2276P	SCHERING FLOUGH LABS	4600145	2	404103	741357	F	2.9	39	19	676	GTRB		260
	SCHERING FLOUGH LABS	2600281	3	404103	741357	F	2.9	39	19	635	GTRB		500
2298P	ECHO LAKE COUNTRY CLUB	2604189	2	404029	741959		3.7	39	20	80	GTRB		400
2304P	HAYWARD MANUFACTURING PRODUCTS	2604712	1	404019	741154		4.9	39	19	274	GTRB		100
	HAYWARD MANUFACTURING PRODUCTS	2606867	2	404039	741141		4.8	39	19	275	GTRB		100
2309P	CARPENTER TECHNOLOGY CORP.	4600178	1	404131	741758	U	1.6	39	19	325	GTRB		200
	CARPENTER TECHNOLOGY CORP.	2419839	RW-1	404129	741752	U	1.6	39	19	35	GOGD		5
	CARPENTER TECHNOLOGY CORP.	2611250-7	RW-10	404129	741752	U	1.6	39	19	31	GOGD		5
	CARPENTER TECHNOLOGY CORP.	2611251-5	RW-9	404131	741752	U	1.5	39	19	68	GOGD		7
	CARPENTER TECHNOLOGY CORP.	2618029	RW-2	404129	741752	U	1.6	39	19	41	GOGD		5
	CARPENTER TECHNOLOGY CORP.	2619030	RW-3	404129	741752		1.6	39	19	34	GOGD		5

NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MLN	DEPTH	GEO1	GEO2	CAPACITY
	CARPENTER TECHNOLOGY CORP.	2618031	RW-4	404129	741752	U	1.6	39	19	32	GQSD		5
	CARPENTER TECHNOLOGY CORP.	2618032	RW-5	404129	741752	U	1.6	39	19	33	GQSD		5
	CARPENTER TECHNOLOGY CORP.	2618033	RW-6	404129	741752	U	1.6	39	19	30	GQSD		5
	CARPENTER TECHNOLOGY CORP.	2618034	RW-7	404129	741752	U	1.6	39	19	31	GQSD		5
	CARPENTER TECHNOLOGY CORP.	2618035	RW-8	404129	741752	U	1.6	39	19	32	GQSD		5
	CARPENTER TECHNOLOGY CORP.	2618036	RW-11	404129	741752	U	1.6	39	19	32	GQSD		5
2347P	GARWOOD PAPERBOARD MILL	4600192	1	403912	741920		4.4	39	06	136	GTRB		150
	GARWOOD PAPERBOARD MILL	4600193	2	403912	741920		4.4	39	06	194	GTRB		
	GARWOOD PAPERBOARD MILL	4600194	3	403912	741920		4.4	39	06	235	GTRB		300
	GARWOOD PAPERBOARD MILL	4600195	4	403912	741920		4.4	39	06	235	GTRB		300
2354P	ESSEX COUNTY DEPT. OF PARKS	2604894	2	404545	741110	T	6.9	13	14	450	GTRB		180
2374P	ORANGE PRODUCTS, INC.	2536137	1R	404517	742140	F	5.4	27	11	134	GQSD		350
2386P	SUBURBAN GOLF CLUB	2601741	1	404126	741516	F	1.7	39	19	585	GTRB		250
	SUBURBAN GOLF CLUB	FOND		404126	741516	F	1.7	39	19	8	GQSD		500
4026FS	EXXON COMPANY USA	HORSES CREEK		403813	741406	T	5.4	39	09		SY		

NEW JERSEY 24 HOUR RAINFALL FREQUENCY DATA

Rainfall amounts in Inches

County	1 year	2 year	5 year	10 year	25 year	50 year	100 year
Atlantic	2.8	3.3	4.3	5.2	6.5	7.6	8.9
Bergen	2.8	3.3	4.3	5.1	6.3	7.3	8.4
Burlington	2.8	3.4	4.3	5.2	6.4	7.6	8.8
Camden	2.8	3.3	4.3	5.1	6.3	7.3	8.5
Cape May	2.8	3.3	4.2	5.1	6.4	7.5	8.8
Cumberland	2.8	3.3	4.2	5.1	6.4	7.5	8.8
Essex	2.8	3.4	4.4	5.2	6.4	7.5	8.7
Gloucester	2.8	3.3	4.2	5.0	6.2	7.3	8.5
Hudson	2.7	3.3	4.2	5.0	6.2	7.2	8.3
Hunterdon	2.9	3.4	4.3	5.0	6.1	7.0	8.0
Mercer	2.8	3.3	4.2	5.0	6.2	7.2	8.3
Middlesex	2.8	3.3	4.3	5.1	6.4	7.4	8.6
Monmouth	2.9	3.4	4.4	5.2	6.5	7.7	8.9
Morris	3.0	3.5	4.5	5.2	6.3	7.3	8.3
Ocean	3.0	3.4	4.5	5.4	6.7	7.9	9.2
Passaic	3.0	3.5	4.4	5.3	6.5	7.5	8.7
Salem	2.8	3.3	4.2	5.0	6.2	7.3	8.5
Somerset	2.8	3.3	4.3	5.0	6.2	7.2	8.2
Sussex	2.7	3.2	4.0	4.7	5.7	6.6	7.6
Union	2.8	3.4	4.4	5.2	6.4	7.5	8.7
Warren	2.8	3.3	4.2	4.9	5.9	6.8	7.8



Attachment R

MEMORANDUM

TO: Red Devil File

January 4, 2011

FROM: Steven Hoke, Bureau of Site Assessment

SUBJECT: Public Water Supply in the Vicinity of Tessler and Weiss and Stonco

The **South Orange Water Department** operates 1 well which is located within 4.0 miles of the site. The well draws from the Passaic Formation (AKA: Brunswick Formation). The well serves 16,924 residents.

2.0 – 3.0 miles 1 well X 16,924 people/well = 16,924

The **Orange City Water Company** operates 5 wells within 4 miles of the site, all drawing from glacial sands and gravel and the Brunswick Formation. According to NJDEP research, the Orange City Water Company operates a total of 7 wells and serves 33,000 residents. Approximately 4,714 people are served per well.

2.0 – 3.0 mile 4 wells X 4,714 people/well = 18,856

3.0 – 4.0 mile 1 well X 4,714 people/well = 4,714

The **New Jersey American – Raritan Water System** serves a total population of approximately 609,325. Approximately 92% of its delivered water is obtained from surface water while the remaining 8% is supplied from approximately 80 wells. The approximate number of people served per well is 609. This water system operates 23 wells located within 4 miles of the site. The wells draw from the Brunswick Formation.

1.0 mile – 2.0 mile 18 wells X 609 people/well = 10,964

2.0 mile - 3.0 mile 2 wells X 609 people/well = 1,218

3.0 mile – 4.0 mile 3 wells X 609 people/well = 1,827

The **New Jersey American – Short Hills Water System** serves a total population of approximately 217,230. Approximately 92% of its delivered water is obtained from surface water while the remaining 8% is supplied from approximately 23 wells. The approximate number of people served per well is 756. This water system operates 2 wells located within 2 miles of the site. The wells draw from the Brunswick Formation.

1.0 mile – 2.0 mile 2 wells X 756 people/well = 1,512

Totals

1.0 mile – 2.0 mile 12,474

2.0 mile – 3.0 miles 36,998

3.0 mile – 4.0 miles 6,541

56,013



HELP	WATER SYSTEM MAIN MENU	Return to Water System Search
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Click on any of the links to view that topic's information.

Total Coliform Results (source water)	Nitrate/nitrite-total nitrate-nitrite	Trihalomethane (THM) Results
Total Coliform Results (distribution system)	Secondary Contaminants	Halocetic Acid (HAA) Results
Total Coliform Summaries	Volatile Organic Contaminants	Lead/Copper 90th Percentile and Results
Positive Total Coliform Results	Inorganic Contaminants	Current Monitoring Schedule
Chlorine residuals	Radiological Contaminants	Monitoring Schedules (current & previous)
System Inventory/Sample Point IDs	Results By Contaminant Name	
Site Visits	GENERATE INVENTORY REPORT	Violations

Water System Information			
PWSID:	NJ2004002	Water System Type:	Community (C)
Water System Name:	NJ AMERICAN WATER - RARITAN	System Status:	A
Site address:	701 RANDOLPH RD	System Ownership:	Private
Principal City & County:	ELIZABETH CITY- 2004, UNION	Primary Source of water:	SW

Click here to return to the Water System Main Menu

Current Water System Contact(s) from NJEMS Masterfile						
Type	Name	Title	Dept	Phone	Fax	Email
Fees/Billing Contact	OLEG KOSTIN			9083013125		
General Contact	OLEG KOSTIN			9083013125		
Licensed Operator	OLEG KOSTIN			9083013125		

Sources of Water				
Water State Facility Code	Name	Type	Status	Availability
CC001001	BURNETT AVENUE	CC	A	P
CC002002	CARNEGIE PLACE	CC	A	P
CC003003	SKI HILL	CC	A	P
CC004004	STIRLING ROAD	CC	A	P
CC005005	PLAINFIELD RD	CC	A	P
CC006006	SUMMIT AVENUE	CC	A	P
CC012012	RIVER ROAD	CC	A	P
IN059207	INTAKE 1	IN	A	P
IN059208	M S INTAKE	IN	A	P
IN059209	CANAL INTAKE	IN	A	P
IN073332	RARITAN RIVER	IN	A	P
WL001002	WELL 1/FIELD LANE	WL	A	P
WL001003	#2	WL	A	P
WL003008	GREEN BROOK NO. 1	WL	A	P
WL003009	ROCK AVE-GREEN BROOK	WL	A	P
WL003010	GREEN BROOK NO. 11	WL	A	P
WL003011	GB WELL 2/WASHINGTON AVE.	WL	A	P
WL003012	GREEN BROOK NO. 3	WL	A	P
WL003013	GREEN BROOK NO. 4	WL	A	P
WL003014	GREEN BROOK NO. 5	WL	A	P
WL003015	GREEN BROOK NO. 6	WL	A	P
WL003016	GREEN BROOK NO. 7	WL	A	P
WL003017	GREEN BROOK NO. 8	WL	A	P
WL003018	GREEN BROOK NO. 9	WL	A	P
WL004021	QUINTON AVE WELL	WL	A	P
WL007030	WELL PAPER ROAD	WL	A	P
WL008217	WELL RD. WELL #2	WL	A	E
WL008270	WELL RD. WELL #1	WL	A	E
WL009032	BRISTOL RD. WELL/211 SHEFFIELD ST.	WL	A	P
WL009033	CHARLES ST WELL 1	WL	A	P
WL009034	CHARLES ST WELL 2	WL	A	P
WL009036	CENTRAL AVE. WELL/269 CENTRAL AVE.	WL	A	P
WL015046	MONTGOMERY WELL #2	WL	A	P
WL016062	ROCK AVE-PISCATAWAY	WL	A	P
WL017048	NETHERWOOD #1	WL	A	P
WL017049	NETHERWOOD #10	WL	A	P
WL017050	NETHERWOOD #11	WL	A	P
WL017051	NETHERWOOD #2	WL	A	P
WL017052	NETHERWOOD #3	WL	A	P
WL017053	NETHERWOOD #4	WL	A	P
WL017055	NETHERWOOD #5	WL	A	P
WL017056	NETHERWOOD #6	WL	A	P
WL017057	NETHERWOOD #7	WL	A	P
WL017058	NETHERWOOD #8	WL	A	P
WL017059	NETHERWOOD #9	WL	A	P
WL017060	GEORGE ST	WL	A	P
WL017328	NETHERWOOD #12	WL	A	P
WL019066	FIFTH STREET WELL	WL	A	S
WL020068	PROSPECT AVE	WL	A	P

WL025078	STONY BROOK 2	WL	A	P
WL025079	STONY BROOK 3	WL	A	P
WL025080	STONY BROOK 4	WL	A	P
WL025081	STONY BROOK 6	WL	A	P
WL025082	SB WELL 7A/WEST DRIVE	WL	A	P
WL025083	STONY BROOK 8	WL	A	P
WL036110	ABERDEEN RD	WL	A	P
WL037112	GLENVIEW AVE WELL	WL	A	P
WL038114	JERUSALEM ROAD #1	WL	A	P
WL038115	JERUSALEM ROAD #3	WL	A	P
WL038116	JERUSALEM ROAD #2	WL	A	P
WL040120	MAPLE GLEN WELL/NORTH MAIN ST.	WL	A	P
WL041122	CLINTON AVE	WL	A	P
WL042124	8TH STREET	WL	A	P
WL043131	SF WELL 2A	WL	A	P
WL043136	WELL 36	WL	A	P
WL043138	WELL 41	WL	A	P
WL043141	SF WELL 47	WL	A	P
WL043144	SF WELL 5A	WL	A	P
WL043146	WELL 53	WL	A	P
WL043147	SF WELL 54	WL	A	P
WL043148	WELL 55	WL	A	P
WL043153	SPRINGFIELD WELL 1A	WL	A	P
WL043326	SPRINGFIELD 2L	WL	A	P
WL043327	WELL 6L	WL	A	P
WL045159	WELL H2	WL	A	P
WL045160	WELL 17 (HUMMOCKS)	WL	A	P
WL045161	WELL 4A	WL	A	P
WL045162	WELL 6AR (HUMMOCKS)	WL	A	P
WL045163	WELL 7A (HUMMOCKS)	WL	A	P
WL045164	HUM WELL 8A	WL	A	P
WL045165	WELL 5A (HUMMOCKS)	WL	A	P
WL045166	HUMMOCKS RANNEY WELL 1/MORRIS AVE & GS P	WL	A	P
WL047190	MONTGOMERY WELL #1	WL	A	S
WL075339	WELL C-1	WL	A	P
WL075340	WELL C-2	WL	A	P
CC007007	BRUNSWICK AVENUE	CC	I	P
CC008008	CLAY AVENUE	CC	I	P
CC009009	KOHLER WAY	CC	I	P
CC010010	LIDGERWOOD AVENUE	CC	I	P
CC011011	MORRIS AVENUE	CC	I	P
CC013013	SALEM AVENUE	CC	I	P
CC014014	WESTFIELD AVENUE	CC	I	P
WL001004	WELL 3/FIELD LANE	WL	I	
WL002006	ELKS WELL/2327 FEATHERBED LANE	WL	I	
WL005023	RICHFIELD AVE. WELL/654 RICHFIELD AVE.	WL	I	
WL006025	SM WELL 4/110SEBRINGS MILL	WL	I	
WL006026	SM WELL 6	WL	I	
WL006027	SM WELL 7	WL	I	
WL006028	SM WELL 8	WL	I	
WL011298	CRANBURY #1A/MAPLEWOOD AVE.	WL	I	
WL011299	CRANBURY #2/MAPLEWOOD AVE.	WL	I	
WL011300	CRANBURY #3/MAPLEWOOD AVE.	WL	I	
WL012040	BOARD OF ED WELL/PARKVIEW AVE	WL	I	
WL013042	ROCKVIEW AVE WELL	WL	I	
WL014044	ROCKVIEW TERR WELL	WL	I	
WL018064	CITY OF PLAINFIELD WELL	WL	I	
WL021070	WATCHUNG AVE. WELL/1656 WATCHUNG AVE.	WL	I	
WL022072	PLAINSBORO WELL 1	WL	I	S
WL023074	PLAINSBORO WELL 2	WL	I	
WL028089	HARRISON ST WELL 1	WL	I	
WL028090	HARRISON ST. WELL 3	WL	I	
WL028091	HARRISON ST WELL 4	WL	I	
WL028092	HARRISON ST WELL 5	WL	I	
WL028093	HARRISON ST WELL 6	WL	I	
WL028094	HARRISON ST WELL 7	WL	I	
WL028095	HARRISON ST. WELL 8	WL	I	
WL030098	ST WALBRUGA WELL 1/PINE ST & RARITAN RD	WL	I	
WL031100	ST WALBRUGA WELL 2/WHEATSHEAF RD	WL	I	
WL032102	ST WALBRUGA WELL 3/PINE ST & 9TH AVE	WL	I	
WL033104	ST WALBURGA WELL 4 /940 WHEATSHEAF RD	WL	I	
WL034106	CHANDLER AVE WELL	WL	I	
WL035108	FIRST AVE WELL	WL	I	
WL039118	MORSE AVE WELL/PLAINFIELD & MORSE AVE	WL	I	
WL043126	SF WELL 23	WL	I	
WL043127	SF WELL 7	WL	I	
WL043128	SF WELL 11	WL	I	
WL043129	SF WELL 12R	WL	I	
WL043132	SF WELL 21R	WL	I	
WL043133	SF WELL 29	WL	I	
WL043134	SF WELL 17	WL	I	
WL043135	SF WELL 32	WL	I	
WL043137	SF WELL 43	WL	I	
WL043139	SF WELL 42	WL	I	
WL043140	SF WELL 44	WL	I	
WL043142	SF WELL 48	WL	I	
WL043143	SF WELL 25	WL	I	
WL043145	SF WELL 24	WL	I	
WL043150	SF WELL 8R	WL	I	
WL043151	SF WELL 9R	WL	I	
WL043152	SPRINGFIELD WELL 1	WL	I	
WL043154	WELL 6A	WL	I	
WL043334	SF WELL 52	WL	I	
WL043335	SF WELL 50	WL	I	

WL044157	POTTERSVILLE WELL/HOMESTEAD RD	WL	I	
WL049194	ELM ST WELL	WL	I	
WL050196	PROSPECT ST WELL	WL	I	
WL051198	WESTFIELD OFF WELL 1	WL	I	
WL051199	WESTFIELD OFF WELL 2	WL	I	
WL053201	WITTKE WELL 1	WL	I	
WL053202	WITTKE WELL 2	WL	I	
WL055204	JEFFERSON PARK WELL 1	WL	I	
WL055205	JEFFERSON PARK WELL 2	WL	I	

This system purchases water from

PWSID	Water System Name
NJ0714001	NEWARK WATER DEPARTMENT
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ0712001	NJ AMERICAN WATER - SHORT HILLS
NJ0712001	NJ AMERICAN WATER - SHORT HILLS

This system sells water to

PWSID	Water System Name
NJ1205001	EDISON WATER CO C/O NJ AMERICAN WATER
NJ1009001	FLEMINGTON WATER DEPARTMENT
NJ1808001	FRANKLIN TOWNSHIP DEPT OF PUBLIC WORKS
NJ1808001	FRANKLIN TOWNSHIP DEPT OF PUBLIC WORKS
NJ1808001	FRANKLIN TOWNSHIP DEPT OF PUBLIC WORKS
NJ1808001	FRANKLIN TOWNSHIP DEPT OF PUBLIC WORKS
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NJ1808001	FRANKLIN TOWNSHIP DEPT OF PUBLIC WORKS
NJ1808001	FRANKLIN TOWNSHIP DEPT OF PUBLIC WORKS
NJ1105001	HOPEWELL BORO W DEPT
NJ1107002	LAWRENCEVILLE WATER COMPANY
NJ1225001	MIDDLESEX WATER COMPANY
NJ1225001	MIDDLESEX WATER COMPANY
NJ1213002	MONROE TWP UTILITY DEPARTMENT
NJ1208001	NJ AMERICAN WATER - JAMESBURG
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ2004001	NJ AMERICAN WATER - LIBERTY
NJ0712001	NJ AMERICAN WATER - SHORT HILLS
NJ0712001	NJ AMERICAN WATER - SHORT HILLS
NJ1221004	SOUTH BRUNSWICK TWP W DI
NJ1221004	SOUTH BRUNSWICK TWP W DI
NJ1221004	SOUTH BRUNSWICK TWP W DI
NJ2013001	UNITED WATER RAHWAY
NJ2021001	WINFIELD MUTUAL HOUSING
NJ2021001	WINFIELD MUTUAL HOUSING

Population(s)/Operating Period(s)

Effective Begin Date	Effective End Date	Start Month/Day	End Month/Day	Type	Population
01/01/2005	Continuous	1/1	12/31	R	609325
06/01/1977	12/31/2004	1/1	12/31	R	535335

Service Connections

Connection Type	Count	Meter Type
RS	178453	MU

Service Area

Population Type	Name
R	RESIDENTIAL AREA

Regulating Agencies

NJ DEP
CENTRAL REGIONAL ENFORCEMENT

NJ Primary & Secondary Drinking Water Standards	NJ Dept of Environmental Protection (NJDEP)	NJDEP - Division of Water Supply	EPA - Groundwater and Drinking Water
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SECTION IV – DESCRIPTION OF WATER SYSTEM

NJ American Water Company - Elizabethtown Division
PWID # 2004002

600 South Avenue
Westfield, NJ 07090
(908)654-1234

NJ American Water Company - Elizabethtown Division is a public community water system consisting of

49 Entry Points to the Distribution System (EPTDS)

- 129 wells
- 0 wells under the influence of surface water
- 7 surface water intake(s)
- 1 purchased ground water
- 6 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by NJ American Water Company - Elizabethtown Division.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Raritan Twp.	Hunterdon	10110
Readington Twp.	Hunterdon	3429
Tewksbury Twp.	Hunterdon	399
Hopewell Twp.	Mercer	57
Lawrence Twp.	Mercer	8022
Princeton Boro	Mercer	7176
Princeton Twp.	Mercer	16062
West Windsor Twp.	Mercer	20505
Cranbury Twp.	Middlesex	2805
Dunellen Boro	Middlesex	6717
Edison Twp.	Middlesex	4332
Middlesex Boro	Middlesex	13731
Piscataway Twp.	Middlesex	36633
Plainsboro Twp.	Middlesex	11775
South Brunswick Twp.	Middlesex	810
South Plainfield Boro	Middlesex	13365
Chester Boro	Morris	84
Bedminster Twp.	Somerset	231
Bound Brook Boro	Somerset	8574
Branchburg Twp.	Somerset	10338
Bridgewater Twp.	Somerset	36456
Franklin Twp.	Somerset	726
Green Brook Twp.	Somerset	6795
Hillsborough Twp.	Somerset	27666
Manville Boro	Somerset	11331
Millstone Boro	Somerset	255
Montgomery Twp.	Somerset	13515

Municipality	County	Population Served - 2003
North Plainfield Boro	Somerset	15120
Peapack-Gladstone	Somerset	2385
Raritan Boro	Somerset	6906
So. Bound Brook Boro	Somerset	3702
Somerville Boro	Somerset	10512
Warren Twp.	Somerset	10755
Watchung Boro	Somerset	4497
Clark Twp.	Union	15108
Cranford Twp.	Union	23193
Fanwood Boro	Union	7740
Garwood Boro	Union	4668
Hillside Twp.	Union	18192
Kenilworth Boro	Union	9399
Linden City	Union	35361
Mountainside Boro	Union	7680
Plainfield City	Union	31371
Roselle Boro	Union	16224
Roselle Park Boro	Union	10473
Scotch Plains Twp.	Union	22782
Union Twp.	Union	51576
Westfield Town	Union	29898

SECTION V - SYSTEM INVENTORY FOR: NJ American Water Company - Elizabethtown Division

Table 7 provides the NJ American Water Company - Elizabethtown Division's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	001	MT STA COMP DEL	T	P				
01	002	WELL 1/FIELD LANE	G	P	Brunswick aquifer	0.432	45-44720	U
01	003	WELL 2/FIELD LANE	G	P	Brunswick aquifer	0.2016	45-44719	U
01	004	WELL 3/FIELD LANE	G	W		0	45-44718	U
02	005	ELKS WELL	T	Y				
02	006	ELKS WELL/2327 FEATHERBED LANE	G	Y	glacial sand and gravel	0.4147	26-04751	U
03	007	GREENBROOK PLANT - JEFFERSON A	T	P				
03	008	GB WELL 1/WASHINGTON AVE	G	P	Brunswick aquifer	0.2952	45-00023	U
03	009	ROCK AVENUE WELL/115 ROCK AVE.	G	P	Brunswick aquifer	0.2707	25-12665	U
03	010	GB WELL 11/WASHINGTON AVE.	G	P	Brunswick aquifer	0.3917	25-02717	U
03	011	GB WELL 2/WASHINGTON AVE.	G	P	Brunswick aquifer	0.694	45-00024	U
03	012	GB WELL 3/WASHINGTON AVE.	G	P	Brunswick aquifer	0.1296	45-00025	U
03	013	GB WELL 4/WASHINGTON AVE	G	P	Brunswick aquifer	0.504	45-00026	U
03	014	GB WELL 5/WASHINGTON AVE.	G	P	Brunswick aquifer	0.3542	25-00572	U
03	015	GB WELL6/WASHINGTON AVE.	G	P	Brunswick aquifer	0.4593	25-00632	U
03	016	GB WELL7/WASHINGTON AVE.	G	P	Brunswick aquifer	0.3053	25-00633	U
03	017	GB WELL 8/WASHINGTON AVE.	G	P	Brunswick aquifer	0.3672	25-02715	U

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
03	018	GB WELL9/WASHINGTON AVE.	G	P	Brunswick aquifer	0.5011	25-02716	U
04	020	QUINTON AVE WELL/KENILWORTH	T	P				
04	021	QUINTON AVE. WELL/660 QUINTON	G	P	Brunswick aquifer	0.2851	46-00014	U
05	022	RICHFIELD AVE WELL	T	U				
05	023	RICHFIELD AVE. WELL/654 RICHFI	G	P	Brunswick aquifer	0.2361	46-00015	U
06	024	SEBRINGS MILLS WELL FIELD	T	Y				
06	025	SM WELL 4/110SEBRINGS MILL	G	W	Brunswick aquifer	0.1728	25-11582	U
06	026	SM WELL 6	G	W	Brunswick aquifer	0.2304	45-00043	U
06	027	SM WELL 7	G	W	Brunswick aquifer	0.1728	25-11367	U
06	028	SM WELL 8	G	W	Brunswick aquifer	0.1728	25-13397	U
07	029	PAPEN ROAD WELL PLANT	T	P				
07	030	PAPEN ROAD WELL	G	P	Brunswick aquifer	0.2779	25-13435	U
08	223	WELLS ROAD PLANT	T	P				
09	031	CHARLES ST COMP DEL	T	P				
09	032	BRISTOL RD. WELL/211 SHEFFIELD	G	P	Brunswick aquifer	0.1901	25-09206	U
09	033	CHAS. ST. WELL1/1021 CHARLES S	G	P	Brunswick aquifer	0.527	25-00872	U
09	034	CHARLES ST. WELL 2/1051 CHARLE	G	P	Brunswick aquifer	0.1685	45-00004	U
10	036	CENTRAL AVE. WELL/269 CENTRAL	G	W	Brunswick aquifer	0.2736	25-09083	U
11	298	CRANBURY #1A/MAPLEWOOD AVE.	G	P	middle Potomac-Raritan-Magothy aquifer	0.1728	28-07800	U
11	299	CRANBURY #2/MAPLEWOOD AVE.	G	W	upper Potomac-Raritan-Magothy aquifer	0.0576	48-00064	U
11	300	CRANBURY #3/MAPLEWOOD AVE.	G	P	middle Potomac-Raritan-Magothy aquifer	0.576	28-04559	U
11	305	MAPLEWOOD AVE. - CRANBURY PLAN	T	Y				
12	039	BOARD OF ED WELL	T	Y				
12	040	BOARD OF ED WELL/PARKVIEW AVE	G	W	Brunswick aquifer	0.3672	45-00022	U
13	041	ROCKVIEW AVE WELL	T	Y				
13	042	ROCKVIEW AVE WELL	G	W	Brunswick aquifer	0.1728	25-13898	U
14	043	ROCKVIEW TERR WELL	T	Y				

2.94

30

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
14	044	ROCKVIEW TERR WELL	G	W	Brunswick aquifer	0.288	25-13106	U
15	045	MONTGOMERY TWP./RT 206/SUNSET	T	P				
15	046	MONTGOMERY TWP WELL 2/BRIDGEPO	G	P	Brunswick aquifer	0.2563	28-05511	U
16	061	ROCK AVENUE WELL/PISCATAWAY	T	P				
16	062	ROCK AVE. WELL/PISCATAWAY	G	P	Brunswick aquifer	0.216	25-13248	U
17	047	NETHERWOOD PLANT	T	P				
17	048	NETHERWOOD WELL 1/1341 NORTH AV	G	P	Brunswick aquifer	0.2376	45-00009	U
17	049	NETHERWOOD WELL 10	G	P	Brunswick aquifer	0.455	45-00018	U
17	050	NETHERWOOD WELL 11	G	P	Brunswick aquifer	0.1958	45-00019	U
17	051	NETHERWOOD WELL 2	G	P	Brunswick aquifer	0.1296	45-00010	U
17	052	NETHERWOOD WELL 3	G	P	Brunswick aquifer	0.2721	45-00011	U
17	053	NETHERWOOD WELL 4	G	P	Brunswick aquifer	0.3945	45-00012	U
17	055	NETHERWOOD WELL 5	G	P	Brunswick aquifer	0.2145	45-00013	U
17	056	NETHERWOOD WELL 6	G	P	Brunswick aquifer	0.3053	45-00014	U
17	057	NETHERWOOD WELL 7	G	P	Brunswick aquifer	0.504	45-00015	U
17	058	NETHERWOOD WELL 8	G	P	Brunswick aquifer	0.2966	45-00016	U
17	059	NETHERWOOD WELL 9	G	P	Brunswick aquifer	0.4392	45-00017	U
17	060	GEORGE ST. WELL	G	P	Brunswick aquifer	0.1296	45-00021	U
17	328	NETHERWOOD 12	G	P	Brunswick aquifer	0.4334	45-00020	U
18	063	CITY OF PLAINFIELD WELL	T	Y				
18	064	CITY OF PLAINFIELD WELL	G	W	Brunswick aquifer	0.9417	45-00027	U
19	065	FIFTH ST WELL	T	S				
19	066	FIFTH ST WELL	G	W	Brunswick aquifer	0.2779	25-12961	U
20	067	PROSPECT AVE WELL	T	P				
20	068	PROSPECT AVE WELL	G	P	Brunswick aquifer	0.2016	25-09037	U
21	069	WATCHUNG AVE WELL	T	Y				
21	070	WATCHUNG AVE. WELL/1656 WATCHU	G	W	Brunswick aquifer	0.4301	25-08185	U
22	071	PLAINSBORO WELL 1/DEER CREEK R	T	S				
22	072	PLAINSBORO WELL 1	G	P	middle Potomac-Raritan-Magothy aquifer	0.504	28-09278	U

5.19

31

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
23	073	PLAINSBORO WELL2/JEFFERS WELL	T	Y				
23	074	PLAINSBORO WELL 2	G	P	Stockton Formation	0.3038	28-11477	U
25	077	STONY BROOK PLANT	T	P				
25	078	SB WELL 2/WEST DRIVE	G	P	Stockton Formation	0.504	48-00008	U
25	079	SB WELL 3 /WEST DRIVE	G	P	Stockton Formation	0.2304	48-00009	U
25	080	SB WELL 4/WEST DRIVE	G	P	Stockton Formation	0.1728	48-00010	U
25	081	SB WELL 6/WEST DRIVE	G	P	Stockton Formation	0.2592	48-00011	U
25	082	SB WELL 7A/WEST DRIVE	G	P	Stockton Formation	0.8639	28-20986	U
25	083	SB WELL 8/WEST DRIVE	G	P	Stockton Formation	0.3231	48-00013	U
28	088	HARRISON ST. PLANT	T	Y				
28	089	HARRISON ST WELL 1	G	W	Stockton Formation	0.0668	48-00005	U
28	090	HARRISON ST. WELL 3	G	Y	Brunswick aquifer	0.0636	28-04371	U
28	091	HARRISON ST WELL 4	G	W	Stockton Formation	0.1068	48-00006	U
28	092	HARRISON ST WELL 5	G	W	Stockton Formation	0.1596	48-00007	U
28	093	HARRISON ST WELL 6	G	W	Stockton Formation	0.3211	28-01886	U
28	094	HARRISON ST WELL 7	G	W	Stockton Formation	0.288	28-04999	U
28	095	HARRISON ST. WELL 8	G	Y	Stockton Formation	0.2304	28-05073	U
30	097	ST WALBURGA WELL 1	T	Y				
30	098	ST WALBRUGA WELL 1/PINE ST & R	G	W	Brunswick aquifer	0.504	26-02302	U
31	099	ST WALBURGA WELL 2	T	Y				
31	100	ST WALBRUGA WELL 2/WHEATSHEAF	G	W	Brunswick aquifer	0.288	26-02360	U
32	101	ST WALBURGA WELL 3	T	Y				
32	102	ST WALBRUGA WELL 3/PINE ST & 9	G	W	Brunswick aquifer	0.5184	26-02412	U
33	103	ST WALBURGA WELL 4	T	Y				
33	104	ST WALBURGA WELL 4 /940 WHEATS	G	W	Brunswick aquifer	0.648	26-02463	U
34	105	CHANDLER AVE WELL	T	Y				
34	106	CHANDLER AVE WELL	G	W	Brunswick aquifer	0.432	26-02393	U
35	107	FIRST AVE WELL	T	Y				
35	108	FIRST AVE WELL	G	W	Brunswick aquifer	0.648	26-01696	U
36	109	ABERDEEN RD WELL	T	P				

2.66

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
36	110	ABERDEEN RD WELL	G	P	Brunswick aquifer	0.5616	25-12631	U
37	111	GLENSIDE AVE WELL	T	U				
37	112	GLENSIDE AVE WELL	G	P	Brunswick aquifer	0.2448	25-07173	U
38	113	JERUSALEM ROAD PLANT	T	P				
38	114	JERUSALEM RD WELL 1	G	P	Brunswick aquifer	0.2865	25-00130	U
38	115	JERUSALEM RD WELL 3	G	P	Brunswick aquifer	0.1152	25-00800	U
38	116	JERUSALM RD WELL 2	G	P	Brunswick aquifer	0.2145	25-00649	U
39	117	MORSE AVE WELL	T	W				
39	118	MORSE AVE WELL/PLAINFIELD & MOR	G	W	Brunswick aquifer	0.1728	25-09281	U
40	119	MAPLE GLEN	T	P				
40	120	MAPLE GLEN WELL/NORTH MAIN ST.	G	P	Brunswick aquifer	0.144	24-07896	U
41	121	CLINTON AVE WELL	T	P				
41	122	CLINTON AVE WELL	G	P	Brunswick aquifer	0.5285	25-13354	U
42	123	EIGHTH ST WELL	T	P				
42	124	EIGHTH ST WELL	G	P	Brunswick aquifer	0.3456	25-12632	U
43	125	SPRINGFIELD PLANT	T	Y				
43	126	SF WELL 23	G	W		0.072	46-41807	U
43	127	SF WELL 7	G	W	Brunswick aquifer	0.144	46-00044	U
43	128	SF WELL 11	G	W	Brunswick aquifer	0.288	46-00048	U
43	129	SF WELL 12R	G	W	Brunswick aquifer	0.144	46-00049	U
43	131	SF WELL 2A	G	W	Brunswick aquifer	0.36	46-00041	U
43	132	SF WELL 21R	G	W	Brunswick aquifer	0.288	46-00050	U
43	133	SF WELL 29	G	W		0.144	46-41809	U
43	134	SF WELL 17	G	W		0	46-41806	U
43	135	SF WELL 32	G	W		0.144	46-41810	U
43	136	SF WELL 36	G	W	Brunswick aquifer	0.144	46-00052	U
43	137	SF WELL 43	G	W		0	46-41805	U
43	138	SF WELL 41	G	W		0.288	46-41811	U
43	139	SF WELL 42	G	W	Brunswick aquifer	0.18	46-00053	U
43	140	SF WELL 44	G	W		0.216	46-41812	U
43	141	SF WELL 47	G	W	Brunswick aquifer	0.18	46-00054	U

2.44

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
43	142	SF WELL 48	G	W	Brunswick aquifer	0.144	46-00055	U
43	143	SF WELL 25	G	W		0.144	46-41808	U
43	144	SF WELL 5A	G	W	Brunswick aquifer	0.216	46-00042	U
43	145	SF WELL 24	G	W	Brunswick aquifer	0.144	46-00051	U
43	146	SF WELL 53	G	W	Brunswick aquifer	0.144	46-00057	U
43	147	SF WELL 54	G	W	Brunswick aquifer	0.36	46-00058	U
43	148	SF WELL 55	G	W	Brunswick aquifer	0.72	46-00059	U
43	150	SF WELL 8R	G	W	Brunswick aquifer	0.216	46-00046	U
43	151	SF WELL 9R	G	W	Brunswick aquifer	0.288	46-00047	U
43	152	SPRINGFIELD WELL 1	G	W	Brunswick aquifer	0.144	46-00039	U
43	153	SPRINGFIELD WELL 1A	G	W	Brunswick aquifer	0.36	46-00040	U
43	154	WELL 6A	G	W	Brunswick aquifer	0.432	46-00043	U
43	326	SPRINGFIELD 2L	G	W		0	26-04081	U
43	327	SPRINGFIELD 6L	G	W	Brunswick aquifer	0.288	26-04083	U
43	334	SF WELL 52	G	W		0	46-41813	U
44	156	POTTERSVILLE WELL	T	Y				
44	157	POTTERSVILLE WELL/HOMESTEAD RD	G	P	igneous and metamorphic rocks	0.0763	25-15051	U
45	158	HUMMOCKS STATION PLANT	T	P				
45	159	HUM WELL H2	G	P	glacial sand and gravel	0.1181	26-04830	U
45	160	HUM WELL 17	G	P	glacial sand and gravel	0.1541	46-00032	U
45	161	HUM WELL 4A	G	P	glacial sand and gravel	0.2448	46-00021	U
45	162	HUM WELL 6AR	G	P	glacial sand and gravel	0.432	46-00024	U
45	163	HUM WELL 7A	G	P	Brunswick aquifer	0.216	46-00025	U
45	164	HUM WELL 8A	G	P	glacial sand and gravel	0.36	46-00026	U
45	165	HUM WELL 5A	G	P	glacial sand and gravel	0.216	46-00023	U
45	166	HUMMOCKS RANNEY WELL 1/MORRIS	G	P	glacial sand and gravel	1.4399	26-12730	U
47	189	MONTGOMERY TWP WELL 1	T	S				
47	190	MONT. TWP WELL 1/ RUTLAND RD	G	P	Brunswick aquifer	0.2664	28-05407	U
49	193	ELM ST WELL	T	Y				
49	194	ELM ST WELL	G	W	Brunswick aquifer	0.504	25-08087	U

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
50	195	PROSPECT ST WELL	T	Y				
50	196	PROSPECT ST WELL	G	W	Brunswick aquifer	0.2304	25-12960	U
51	197	WESTFIELD OFFICE #1	T	Z				
53	200	WITTKE PLANT	T	Y				
53	201	WITTKE WELL 1	G	W	Brunswick aquifer	0.2448	25-04639	U
53	202	WITTKE WELL 2	G	W	Brunswick aquifer	0.7487	25-05083	U
55	203	JEFFERSON PARK PLANT	T	U				
55	204	JEFFERSON PARK WELL 1	G	P	middle Potomac-Raritan-Magothy aquifer	0.7788	28-05368	U
55	205	JEFFERSON PARK WELL 2	G	P	middle Potomac-Raritan-Magothy aquifer	0.5866	28-06455	U
59	206	RARITAN-MILLSTONE WATER TREATM	T	P				
59	207	RARITAN RIVER	S	P	Raritan River	50	elizin4	
59	207	RARITAN RIVER	S	P	Raritan River	50	elizin2	
59	207	RARITAN RIVER	S	P	Raritan River	50	elizin1	
59	207	RARITAN RIVER	S	P	Raritan River	50	elizin3	
59	208	MILLSTONE RIVER	S	P	Millstone River	25	elizmill	
59	209	DELAWARE - RARITAN CANAL	S	P	Delaware & Raritan Canal	32	elizin5	
65	308	ELIZABETH WATER DEPARTMENT	P	P				
66	310	FLEMLINGTON WATER COMPANY	P	P				
67	312	FRANKLIN TWP.	P	P				
68	314	MONROE TWP.	P	P				
69	321	NEW JERSEY AMERICAN WATER CO.	P	P				
70	323	NEWARK WATER CO.	W	P				
71	325	SOUTH BRUNSWICK	P	P				
73	331	CANAL ROAD WTP	T	P				
73	332	RARITAN RIVER	S	P	Raritan River	40	elizcnrd	
75	339	WELL C-1	G	P	Brunswick aquifer	0.1843	25-11880	U
75	340	WELL C-2	G	P	Brunswick aquifer	0.1857	25-12662	U
75	342	PLANT/DUKES PKWY & N 6TH AVE(M	T	P				

1.36

***KEY**

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I = Interim, O = Other, P = Permanent, R = Reserve, S = Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The NJ American Water Company - Elizabethtown Division contains 49 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

22.52 wells 8 %
297 su water 92 %

pop. 609,325 36

For public water systems that consist of a combination of well(s) and intake(s), the EPTDS received a ground water EPTDS rating and a surface water EPTDS rating. Even in circumstances where the surface water is blended with ground water, the EPTDS received two separate susceptibility ratings. A separate ETPDS rating is provided for the ground water and the surface water because separate susceptibility models were developed for ground and surface water. Ground water and surface water susceptibility models differ in susceptibility rating score, therefore, the rating results are not on the same scale.

If a facility has only one well or intake contributing to the EPTDS, that EPTDS received the same rating as the well or intake. DEP used the equation below to determine an EPTDS susceptibility rating.

Table 10 provides an example of how the EPTDS ratings were calculated. To review how the EPTDS ratings were calculated for the NJ American Water Company - Elizabethtown Division, please refer to Appendix A- Attachment 4.

Table 10: Example of an EPTDS Susceptibility Rating Calculation
EPTDS 01

Source	Capacity (MGD)	Source Susceptibility Score Rating (0-20, low to high)	Total = Source Contribution
Well 1	1.09	20	(1.09*20) = 21.8
Well 2	1.72	10	17.2
Well 3	0.72	5	3.6
Well 4	1.48	10	14.8
Well 5	0.75	20	15.0
Total Capacity	5.76		72.4
EPTDS Susceptibility Score is $72.4 / 5.76 = 12.6$			

For the above example, the sum of the source contributions for EPTDS 01 (72.4) is divided by the total capacity from all sources (5.76) giving a susceptibility score for the EPTDS of 12.6. The original range for rating sources was 0-5 low, 6-10 medium, 11-20 high. EPTDS 01 susceptibility rating was 12.6; therefore the EPTDS would receive a high rating.

Table 11 lists the susceptibility ratings for each EPTDS for the NJ American Water Company - Elizabethtown Division.

Table 11: Susceptibility Rating for EPTDS

EPTDS ID	EPTDS Name	Contaminant Category							
		Pathogens	Nutrients	Pesticides	VOCs	Inorganics	Radionuclides	Radon	DBPs
		Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating
01	MT STA COMP DEL	M	M	L	H	M	M	H	M
03	GREENBROOK PLANT - JEFFERSON A	M	M	L	H	M	M	H	H
04	QUINTON AVE WELL/KENILWORTH	L	M	L	H	H	M	H	M
05	RICHFIELD AVE WELL	L	M	L	H	M	M	H	M
07	PAPEN ROAD WELL PLANT	M	H	L	L	L	M	H	M
09	CHARLES ST COMP DEL	L	M	L	H	M	M	H	M
11	MAPLEWOOD AVE. - CRANBURY PLAN	L	H	M	H	M	H	M	M
15	MONTGOMERY TWP./RT 206/SUNSET	M	H	M	L	M	M	H	H
16	ROCK AVENUE WELL/PISCATAWAY	M	M	L	H	M	M	H	M
17	NETHERWOOD PLANT	L	M	L	H	M	H	H	M
20	PROSPECT AVE WELL	L	M	L	H	L	M	H	M
22	PLAINSBORO WELL 1/DEER CREEK R	M	H	M	H	M	H	M	M
23	PLAINSBORO WELL2/JEFFERS WELL	M	H	M	H	M	H	H	H
25	STONY BROOK PLANT	M	H	M	H	L	M	H	H
36	ABERDEEN RD WELL	M	M	L	H	M	M	H	M
37	GLENSIDE AVE WELL	M	M	L	H	M	M	H	M
38	JERUSALEM ROAD PLANT	L	M	L	H	M	M	H	M
40	MAPLE GLEN	M	H	L	H	M	M	H	M
41	CLINTON AVE WELL	M	M	L	H	M	H	H	M
42	EIGHTH ST WELL	M	M	L	H	H	H	H	M
44	POTTERSVILLE WELL	H	M	M	L	L	M	H	M
45	HUMMOCKS STATION PLANT	M	H	L	H	M	M	H	M
47	MONTGOMERY TWP WELL 1	M	H	M	L	H	M	H	H
55	JEFFERSON PARK PLANT	M	H	M	L	M	H	M	M
59	RARITAN-MILLSTONE WATER TREATM	H	H	H	M	H	L	L	H
73	CANAL ROAD WTP	H	H	H	M	H	L	L	H
75	PLANT/DUKES PKWY & N 6TH AVE(M	H	H	M	H	H	M	H	H



HELP	WATER SYSTEM MAIN MENU	Return to Water System Search
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Click on any of the links to view that topic's information.

Total Coliform Results (source water)	Nitrate/nitrite/total nitrate-nitrite	Trihalomethane (THM) Results
Total Coliform Results (distribution system)	Secondary Contaminants	Halooacetic Acid (HAA) Results
Total Coliform Summaries	Volatile Organic Contaminants	Lead/Copper 90th Percentile and Results
Positive Total Coliform Results	Inorganic Contaminants	Current Monitoring Schedule
Chlorine residuals	Radiological Contaminants	Monitoring Schedules (current & previous)
System Inventory Sample Point IDs	Results By Contaminant Name	
Site Visits	GENERATE INVENTORY REPORT	Violations

Water System Information

PWSID:	NJ0719001	Water System Type:	Community (C)
Water System Name:	SOUTH ORANGE WATER DEPARTMENT	System Status:	A
Site address:	300 WALTON AVE	System Ownership:	Local govt. or municipal authority
Principal City & County:	SOUTH ORANGE VILLAGE-0719, ESSEX	Primary Source of water:	GW

Click here to return to the Water System Main Menu

Current Water System Contact(s) from NJEMS Masterfile

Type	Name	Title	Dept	Phone	Fax	Email
Fees/Billing Contact	JOHN GROSS	ADMINISTRATOR		9733793126		
General Contact	JOHN GROSS	ADMINISTRATOR		9733793126		
Licensed Operator	THOMAS VALENZA			9733793126		

Sources of Water

Water State Facility Code	Name	Type	Status	Availability
CC004023	WHITE OAK RIDGE AND SOUTH ORANGE AVE.	CC	A	P
WL002008	WELL 17	WL	A	P
CC003028	N.J. AMERICAN W. CO. SHORT HILLS	CC	I	P
WL002003	MEADOWBROOK WELLFIELD WELL 11	WL	I	
WL002004	MEADOWBROOK WELLFIELD WELL 12	WL	I	
WL002005	MEADOWBROOK WELLFIELD WELL 13	WL	I	
WL002006	MEADOWBROOK WELLFIELD WELL 15	WL	I	
WL002007	MEADOWBROOK WELLFIELD WELL 16	WL	I	
WL002009	WALTON WELLFIELD WELL 1	WL	I	
WL002010	WALTON WELLFIELD WELL 14	WL	I	
WL002011	WALTON WELLFIELD WELL 2	WL	I	
WL002012	WALTON WELLFIELD WELL 20	WL	I	
WL002013	WALTON WELLFIELD WELL 3	WL	I	
WL002014	WALTON WELLFIELD WELL 5	WL	I	
WL002015	WALTON WELLFIELD WELL 7	WL	I	
WL002016	WALTON WELLFIELD WELL 8	WL	I	

This system purchases water from

PWSID	Water System Name
NJ0705001	EAST ORANGE WATER COMMISSION

Population(s)/Operating Period(s)

Effective Begin Date	Effective End Date	Start Month/Day	End Month/Day	Type	Population
01/06/2005	Continuous	1/1	12/31	R	16924
06/01/1977	01/05/2005	1/1	12/31	R	16900

Service Connections

Connection Type	Count	Meter Type
RS	4621	MU

Service Area

Population Type	Name
R	RESIDENTIAL AREA

Regulating Agencies

NORTHERN ENFORCEMENT
NJ DEP

NJ Primary & Secondary Drinking Water Standards	NJ Dept of Environmental Protection (NJDEP)	NJDEP - Division of Water Supply	EPA - Groundwater and Drinking Water
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SECTION IV – DESCRIPTION OF WATER SYSTEM

South Orange Water Department
PWID # 0719001

99 South Grove Street
East Orange, NJ 07079
(973)266-8869

South Orange Water Department is a public community water system consisting of

1 Entry Points to the Distribution System (EPTDS)

- 1 wells
- 0 wells under the influence of surface water
- 0 surface water intake(s)
- 2 purchased ground water
- 0 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by South Orange Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
South Orange Village	Essex	

SECTION V - SYSTEM INVENTORY FOR: South Orange Water Department

Table 7 provides the South Orange Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	028	N.J. AMERICAN W. CO. SHORT HILLS	W	P				
02	002	TP FOR MEADOWBROOK WELL	T	P				
02	008	MEADOWBROOK WELLFIELD 17	G	P	Brunswick aquifer	0.576	26-01354	U
04	023	EAST ORANGE W D	W	P				

***KEY**

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I = Interim, O = Other, P = Permanent, R = Reserve, S = Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

For public water systems that consist of a combination of well(s) and intake(s), the EPTDS received a ground water EPTDS rating and a surface water EPTDS rating. Even in circumstances where the surface water is blended with ground water, the EPTDS received two separate susceptibility ratings. A separate EPTDS rating is provided for the ground water and the surface water because separate susceptibility models were developed for ground and surface water. Ground water and surface water susceptibility models differ in susceptibility rating score, therefore, the rating results are not on the same scale.

If a facility has only one well or intake contributing to the EPTDS, that EPTDS received the same rating as the well or intake. DEP used the equation below to determine an EPTDS susceptibility rating.

Table 10 provides an example of how the EPTDS ratings were calculated. To review how the EPTDS ratings were calculated for the South Orange Water Department, please refer to Appendix A- Attachment 4.

Table 10: Example of an EPTDS Susceptibility Rating Calculation
EPTDS 01

Source	Capacity (MGD)	Source Susceptibility Score Rating (0-20, low to high)	Total = Source Contribution
Well 1	1.09	20	$(1.09 \times 20) = 21.8$
Well 2	1.72	10	17.2
Well 3	0.72	5	3.6
Well 4	1.48	10	14.8
Well 5	0.75	20	15.0
Total Capacity	5.76		72.4
EPTDS Susceptibility Score is $72.4 / 5.76 = 12.6$			

For the above example, the sum of the source contributions for EPTDS 01 (72.4) is divided by the total capacity from all sources (5.76) giving a susceptibility score for the EPTDS of 12.6. The original range for rating sources was 0-5 low, 6-10 medium, 11-20 high. EPTDS 01 susceptibility rating was 12.6; therefore the EPTDS would receive a high rating.

Table 11 lists the susceptibility ratings for each EPTDS for the South Orange Water Department.

Table 11: Susceptibility Rating for EPTDS

EPTDS ID	EPTDS Name	Contaminant Category							
		Pathogens	Nutrients	Pesticides	VOCs	Inorganics	Radionuclides	Radon	DBPs
		Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating
02	TP FOR MEADOWBROOK WELL	L	M	L	H	H	H	H	M



HELP	WATER SYSTEM MAIN MENU	Return to Water System Search
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Click on any of the links to view that topic's information.

Total Coliform Results (source water)	Nitrate/nitrite/total nitrate/nitrite	Trihalomethane (THM) Results
Total Coliform Results (distribution system)	Secondary Contaminants	Halacetic Acid (HAA) Results
Total Coliform Summaries	Volatile Organic Contaminants	Lead/Copper 90th Percentile and Results
Positive Total Coliform Results	Inorganic Contaminants	
Chlorine residuals	Radiological Contaminants	Current Monitoring Schedule
System Inventory Sample Point IDs	Results By Contaminant Name	Monitoring Schedules (current & previous)
Site Visits	GENERATE INVENTORY REPORT	Violations

Water System Information			
PWSID:	NJ0717001	Water System Type:	Community (C)
Water System Name:	ORANGE WATER DEPT	System Status:	A
Site address:	632 BEECH ST	System Ownership:	Local govt. or municipal authority
Principal City & County:	ORANGE CITY-0717, ESSEX	Primary Source of water:	GW
Click here to return to the Water System Main Menu			

Current Water System Contact(s) from NJEMS Masterfile						
Type	Name	Title	Dept	Phone	Fax	Email
Fees/Billing Contact	JOHN W KELLEY	FINANCE DIRECTOR	UNITED WATER			
Other	JOHN W KELLEY	FINANCE DIRECTOR	UNITED WATER			
Other	PETER TYRRELL		UNITED WATER			
General Contact	MR ROBERT GALANTE		UNITED WATER	9736787585		
Licensed Operator	ROBERT GALANTE			9736787585		

Sources of Water:					
Water State Facility Code	Name	Type	Status	Availability	
WL001002	WELL 2	WL	A	P	
WL001003	WELL 3	WL	A	P	
WL001004	WELL 4	WL	A	P	
WL001005	WELL 5	WL	A	P	
WL001006	WELL 6	WL	A	P	
WL002009	WELL 7	WL	A	P	
WL003011	WELL 8	WL	A	P	
WL001007	SURFACE WATER RESERVOIR/CHERRY LANE	WL	I		
WL004013	BROOK ALLEY	WL	I		

Population(s)/Operating Period(s)					
Effective Begin Date	Effective End Date	Start Month/Day	End Month/Day	Type	Population
06/01/1977	Continuous	1/1	12/31	R	33000

Service Connections		
Connection Type	Count	Meter Type
RS	5500	ME

Service Area	
Population Type	Name
R	RESIDENTIAL AREA

Regulating Agencies	
NORTHERN ENFORCEMENT	
NJ DEP	

NJ Primary & Secondary Drinking Water Standards	NJ Dept of Environmental Protection (NJDEP)	NJDEP - Division of Water Supply	EPA - Groundwater and Drinking Water
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SECTION IV – DESCRIPTION OF WATER SYSTEM

Orange Water Department
PWID # 0717001

99 South Grove Street
East Orange, NJ 07018
(973)266-8869

Orange Water Department is a public community water system consisting of

- 4 Entry Points to the Distribution System (EPTDS)
 - 8 wells
 - 0 wells under the influence of surface water
 - 0 surface water intake(s)
 - 2 purchased ground water
 - 1 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by Orange Water Department.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Orange City	Essex	

SECTION V - SYSTEM INVENTORY FOR: Orange Water Department

Table 7 provides the Orange Water Department's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	001	BEECH ST. & BALLY (CHESTNUT ST	T	P				
01	002	WELL #2	G	P	glacial sand and gravel	1.2254	46-00169	U
01	003	WELL 3	G	P	glacial sand and gravel	1.3189	46-00170	U
01	004	WELL 4	G	P	glacial sand and gravel	1.6141	46-00171	U
01	005	WELL 5	G	P	glacial sand and gravel	1.0079	26-02262	U
01	006	WELL 6	G	P	glacial sand and gravel	1.1692	26-03701	U
02	008	ORANGE PARK	T	P				
02	009	ORANGE PARK	G	P	Brunswick aquifer	0.5011	26-03440	U
03	010	GIST PLACE	T	P				
03	011	GIST PLACE	G	P	Brunswick aquifer	0.8639	26-04322	U
04	012	BROOK ALLEY	T	Y				
04	013	BROOK ALLEY	G	Y	Brunswick aquifer	0.72	26-04444	U
05	015	EAST ORANGE W D	W	E				
06	017	SOUTH ORANGE W D	W	E				
07	020	NJAWSC-SHORT-HILLS	P	E				

***KEY**

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I = Interim, O = Other, P = Permanent, R = Reserve, S = Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The Orange Water Department contains 4 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

Table 9 illustrates the susceptibility rating for each individual source for each of the contaminant categories.

Table 9: Susceptibility Rating for Drinking Water Source(s)

EPTDS ID	Source ID	Source Name	Contaminant Category							
			Pathogens	Nutrients	Pesticides	VOCs	Inorganics	Radionuclides	Radon	DBPs
			Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating
01	002	WELL #2	M	H	L	L	M	M	H	M
01	003	WELL 3	M	M	L	L	M	M	H	M
01	004	WELL 4	M	H	L	L	M	M	H	M
01	005	WELL 5	M	H	L	L	M	M	H	M
01	006	WELL 6	M	M	L	L	M	M	H	M
02	009	ORANGE PARK	L	M	L	H	H	H	H	M
03	011	GIST PLACE	M	M	L	H	H	H	H	M
04	013	BROOK ALLEY	L	M	L	H	H	H	H	M

The potential contaminant source inventory and sensitivity variables were used to determine the susceptibility ratings for the sources. For specific information on the water system's potential contaminant source inventory and sensitivity variables, please refer to the Individual Explanatory Variable Inventory and the Specific Potential Contaminant Sources Inventory, Appendix A- Attachment 1 and 2.

For public water systems that consist of a combination of well(s) and intake(s), the EPTDS received a ground water EPTDS rating and a surface water EPTDS rating. Even in circumstances where the surface water is blended with ground water, the EPTDS received two separate susceptibility ratings. A separate ETPDS rating is provided for the ground water and the surface water because separate susceptibility models were developed for ground and surface water. Ground water and surface water susceptibility models differ in susceptibility rating score, therefore, the rating results are not on the same scale.

If a facility has only one well or intake contributing to the EPTDS, that EPTDS received the same rating as the well or intake. DEP used the equation below to determine an EPTDS susceptibility rating.

Table 10 provides an example of how the EPTDS ratings were calculated. To review how the EPTDS ratings were calculated for the Orange Water Department, please refer to Appendix A- Attachment 4.

Table 10: Example of an EPTDS Susceptibility Rating Calculation
EPTDS 01

Source	Capacity (MGD)	Source Susceptibility Score Rating (0-20, low to high)	Total = Source Contribution
Well 1	1.09	20	$(1.09 \times 20) = 21.8$
Well 2	1.72	10	17.2
Well 3	0.72	5	3.6
Well 4	1.48	10	14.8
Well 5	0.75	20	15.0
Total Capacity	5.76		72.4
EPTDS Susceptibility Score is $72.4 / 5.76 = 12.6$			

For the above example, the sum of the source contributions for EPTDS 01 (72.4) is divided by the total capacity from all sources (5.76) giving a susceptibility score for the EPTDS of 12.6. The original range for rating sources was 0-5 low, 6-10 medium, 11-20 high. EPTDS 01 susceptibility rating was 12.6; therefore the EPTDS would receive a high rating.

Table 11 lists the susceptibility ratings for each EPTDS for the Orange Water Department.

Table 11: Susceptibility Rating for EPTDS

EPTDS ID	EPTDS Name	Contaminant Category							
		Pathogens	Nutrients	Pesticides	VOCs	Inorganics	Radionuclides	Radon	DBPs
		Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating
01	BEECH ST. & BALLY (CHESTNUT ST)	M	H	L	L	M	M	H	M
02	ORANGE PARK	L	M	L	H	H	H	H	M
03	GIST PLACE	M	M	L	H	H	H	H	M



HELP	WATER SYSTEM MAIN MENU	Return to Water System Search
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Total Coliform Results (source water)	Nitrate/nitrite/total nitrate-nitrite	Trihalomethane (THM) Results
Total Coliform Results (distribution system)	Secondary Contaminants	Halooacetic Acid (HAA) Results
Total Coliform Summaries	Volatile Organic Contaminants	Lead/Copper 90th Percentile and Results
Positive Total Coliform Results	Inorganic Contaminants	Current Monitoring Schedule
Chlorine residuals	Radiological Contaminants	Monitoring Schedules (current & previous)
System Inventory Sample Point IDs	Results By Contaminant Name	
Site Visits	GENERATE INVENTORY REPORT	Violations

Water System Information			
PWSID:	NJ0712001	Water System Type:	Community (C)
Water System Name:	NJ AMERICAN WATER - SHORT HILLS	System Status:	A
Site address:	167 JOHN F KENNEDY PKWY	System Ownership:	Private
Principal City & County:	MILLBURN TWP.-0712, ESSEX	Primary Source of water:	SW

Click here to return to the Water System Main Menu

Current Water System Contact(s) from NJEMS Masterfile						
Type	Name	Title	Dept	Phone	Fax	Email
Fees/Billing Contact	BILL OESTERLE			9735645727		
General Contact	BILL OESTERLE			9735645727		
Licensed Operator	BILL OESTERLE	PRODUCTION SUPERVISOR		9735645727		

Sources of Water				
Water State Facility Code	Name	Type	Status	Availability
CC001001	E. HANOVER INTERCONNECTION	CC	A	P
CC002002	NEW JERSEY AMERICAN WATER # 5	CC	A	P
CC003003	NEW JERSEY AMERICAN WATER # 10	CC	A	P
CC004004	NEW JERSEY AMERICAN WATER # 12	CC	A	P
CC005005	PVB5	CC	A	P
CC006006	COIT ST BOOSTER	CC	A	P
CC007007	HIGH POINT DRIVE	CC	A	P
CC008008	DIAMOND HILL BOOSTER STATION	CC	A	P
CC009009	CHAMBERS BROOK	CC	A	P
CC010010	LIBERTY CORNERS	CC	A	P
CC011011	NJEMS 20-203 CONSECUTIVE CONNECTION	CC	A	P
CC011C01	MAIN STREET	CC	A	P
CC012012	SKI-HILL ROAD	CC	A	P
CC013013	HARRISON AVE	CC	A	P
CC014014	MOUNTAIN AVE	CC	A	P
CC015015	N.J.AMERICAN/MENDHAM	CC	A	P
IN001004	CANOE BROOK	IN	A	P
IN001006	PASSAIC RIVER KENNEDY PARKWAY	IN	A	P
IN002141	CANOE BROOK	IN	A	P
IN002142	PASSAIC RIVER	IN	A	P
WL001013	WELL 38	WL	A	P
WL001021	WELL KELLY 4	WL	A	P
WL001022	WELL KELLY 5	WL	A	P
WL001024	WELL LAYNE D	WL	A	P
WL002014	WELL 44	WL	A	P
WL002015	WELL 46	WL	A	P
WL002021	KELLY WELL 9	WL	A	P
WL004030	KELLY B	WL	A	P
WL004031	KELLY C	WL	A	P
WL005033	WELL 12	WL	A	P
WL005034	WELL 14	WL	A	P
WL005035	WELL 15	WL	A	P
WL005036	WELL 17	WL	A	P
WL005037	WELL 18	WL	A	P
WL006040	WELL 51	WL	A	P
WL006041	WELL 52	WL	A	P
WL025061	N.E. WELL	WL	A	P
WL052127	WELL 2- KNOLLWOOD LANE	WL	A	P
WL053129	WELL 3- MOUNTAIN VALLEY	WL	A	P
WL054131	WELL 4- FRANKLIN ROAD	WL	A	P
WL061156	3	WL	A	P
WL061160	WELL 4 (NAZARETH 3A)	WL	A	P
WL061161	WELL 3 (NAZARETH 4)	WL	A	P
WL001012	KELLY #1	WL	I	
WL002016	47	WL	I	P
WL002017	48	WL	I	
WL002020	WELL KELLY 2	WL	I	P
WL004029	WELL A	WL	I	
WL006039	WELL #50	WL	I	O

WL051123	CHERRY LANE WELL	WL	I	
WL062158	AMMERMAN WAY WELL (MERGED FROM #1406001)	WL	I	E
WL001014	KELLY WELL 1R	WL	P	I
WL001015	KELLY WELL 5R	WL	P	I
WL002018	#48R	WL	P	P

This system purchases water from

PWSID	Water System Name
NJ0713001	MONTCLAIR WATER BUREAU
NJ1432001	MORRIS COUNTY MUA
NJ2004002	NJ AMERICAN WATER - RARITAN
NJ2004002	NJ AMERICAN WATER - RARITAN
NJ1605002	PASSAIC VALLEY WATER COMMISSION
NJ1605002	PASSAIC VALLEY WATER COMMISSION
NJ1605002	PASSAIC VALLEY WATER COMMISSION
NJ1424001	SOUTHEAST MORRIS COUNTY MUA

This system sells water to

PWSID	Water System Name
NJ0704001	CEDAR GROVE WATER DEPT
NJ0704001	CEDAR GROVE WATER DEPT
NJ0710001	LIVINGSTON TWP DIV OF WATER
NJ0710001	LIVINGSTON TWP DIV OF WATER
NJ2004002	NJ AMERICAN WATER - RARITAN
NJ2004002	NJ AMERICAN WATER - RARITAN
NJ1419001	ROXITICUS WATER COMPANY INC.
NJ1424001	SOUTHEAST MORRIS COUNTY MUA

Population(s)/Operating Period(s)

Effective Begin Date	Effective End Date	Start Month/Day	End Month/Day	Type	Population
01/01/2005	Continuous	1/1	12/31	R	217230
06/01/1977	12/31/2004	1/1	12/31	R	197483

Service Connections

Connection Type	Count	Meter Type
RS	81832	UN

Service Area

Population Type	Name
R	RESIDENTIAL AREA

Regulating Agencies

NORTHERN ENFORCEMENT
NJ DEP

NJ Primary & Secondary Drinking Water Standards	NJ Dept of Environmental Protection (NJDEP)	NJDEP - Division of Water Supply	EPA - Groundwater and Drinking Water
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SECTION IV – DESCRIPTION OF WATER SYSTEM

NJ American Water Company - Short Hills Division
PWID # 0712001

167 John F. Kennedy Parkway
Short Hills, NJ 07078-2795
(800)652-6987

NJ American Water Company - Short Hills Division is a public community water system consisting of

12 Entry Points to the Distribution System (EPTDS)

25 wells

0 wells under the influence of surface water

4 surface water intake(s)

12 purchased ground water

3 purchased surface water

Table 6 below contains the municipalities and the population within each of these municipalities served by NJ American Water Company - Short Hills Division.

Table 6: Municipalities and Population Served

Municipality	County	Population Served - 2003
Irvington Town	Essex	24964
Livingston Twp.	Essex	1239
Maplewood Twp.	Essex	18923
Millburn Twp.	Essex	17490
North Caldwell Boro	Essex	173
South Orange Village	Essex	300
West Orange Town	Essex	33359
Frenchtown Boro	Hunterdon	1037
Chatham Twp.	Morris	7576
Chester Twp.	Morris	951
Florham Park Boro	Morris	306
Harding Twp.	Morris	101
Mendham Boro	Morris	5005
Mendham Twp.	Morris	1840
Mount Olive Twp.	Morris	744
Passaic Twp.	Morris	8393
Little Falls Twp.	Passaic	8345
West Paterson Boro	Passaic	2429
Bedminster Twp.	Somerset	5817
Bernards Twp.	Somerset	20218
Bernardsville Boro	Somerset	5076
Far Hills Boro	Somerset	715
Warren Twp.	Somerset	142
Watchung Boro	Somerset	167
Berkeley Heights Twp.	Union	13036
Hillside Twp.	Union	56
New Providence Boro	Union	10648

Municipality	County	Population Served - 2003
Springfield Twp.	Union	11373
Summit City	Union	16581
Union Twp.	Union	365
Belvidere Town	Warren	2391
Franklin Twp.	Warren	198
Oxford Twp.	Warren	778
Washington Boro	Warren	5679
Washington Twp.	Warren	3210
White Twp.	Warren	767

SECTION V - SYSTEM INVENTORY FOR: NJ American Water Company - Short Hills Division

Table 7 provides the NJ American Water Company - Short Hills Division's treatment plant(s); source(s); the sources' location(s); whether the source(s) are ground water, surface water, or a purchased supply; and the sources' capacity(s). The first column contains the EPTDS ID and sources contributing to the same EPTDS are identified by the same number. An EPTDS is the entry point to the distribution system, and for most community water systems this location is after the water is treated at a treatment plant.

In the case of a ground water source, the well's confinement status and well permit number are provided.

Table 7: Drinking Water Source and EPTDS Inventory

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
01	004	CANOE BROOK	S	P	Canoe Brook	5.4	canoebk	
01	005	CANOE BROOK PLANT #1	T	P				
01	006	PASSAIC RIVER KENNEDY PARKWAY	S	P	Passaic River	82.12	pasaicin	
01	012	KELLY #1	G	W	glacial sand and gravel	0.55	45-00260	U
01	013	#38	G	P	glacial sand and gravel	0.648	45-00257	U
01	021	KELLY #4	G	P	glacial sand and gravel	0.4795	45-00262	U
01	022	KELLY #5	G	P	glacial sand and gravel	0.9935	45-00263	U
01	024	LAYNE D	G	P	glacial sand and gravel	0.514	45-00258	U
02	007	CANOE BROOKE #2	T	S				
02	014	#44	G	P	glacial sand and gravel	0.72	25-02577	U
02	015	#46	G	P	glacial sand and gravel	0.3528	25-03703	U
02	016	#47	G	P	glacial sand and gravel	0.3427	25-04019	U
02	017	#48	G	P	glacial sand and gravel	0.7415	25-04100	U
02	020	KELLY #2	G	P	glacial sand and gravel	1.3679	45-00261	U
02	141	CANOE BROOK	S	P	Canoe Brook	5.4	canoebk	
02	142	PASSAIC RIVER	S	P	Passaic River	82.12	pasaicin	
04	028	SHORT HILLS WELLS	T	P				
04	029	WELL A	G	U	glacial sand and gravel	1.0842	46-00109	U
04	030	WELL B	G	P	glacial sand and gravel	0.7718	46-00110	U
04	031	WELL C	G	P	glacial sand and gravel	1.5004	46-00111	U
05	032	BALTUSROL	T	P				

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
05	033	WELL 12	G	P	Brunswick aquifer	0.2894	45-00265	U
05	034	WELL 14	G	P	Brunswick aquifer	0.3081	45-00266	U
05	035	WELL 15	G	P	Brunswick aquifer	0.36	45-00267	U
05	036	WELL 17	G	P	Brunswick aquifer	0.4291	45-00268	U
05	037	WELL 18	G	P	Brunswick aquifer	0.36	45-00269	U
06	038	PASSAIC RIVER WELLS	T	P				
06	040	WELL #51	G	P	glacial sand and gravel	0.8337	25-04873	U
06	041	WELL #52	G	P	glacial sand and gravel	1.4399	25-18486	U
25	060	NORTHEAST WELL	T	P				
25	061	NORTHEAST WELL	G	P	Brunswick aquifer	0.5385	25-10173	U
26	066	ELIZABETHTOWN W.C.	W	P				
27	071	CHATHAM W.D.	W	E				
28	074	EAST ORANGE W.D.	W	E				
29	078	LIVINGSTON WATER	W	E				
30	082	MADISON	W	E				
31	086	MONTCLAIR	W	E				
32	089	PASSAIC VALLEY WATER COMM.	P	P				
33	092	ORANGE	W	E				
34	095	NEWARK	P	E				
35	098	NEWARK	P	P				
36	102	SO. ORANGE	W	E				
37	104	VERONA	W	E				
50	119	SE MORRIS COUNTY UTILITIES AUTHORITY	W	E				
51	122	CHERRY LANE	T	Y				
51	123	CHERRY LANE WELL	G	U	igneous and metamorphic rocks	0.072	25-03236	U
52	126	KNOLLWOOD ROAD TP	T	P				
52	127	KNOLLWOOD ROAD (#2)	G	P	igneous and metamorphic rocks	0.2131	25-15323	U
53	128	MOUNTAIN VALLEY TP	T	P				
53	129	MOUNTAIN VALLEY (#3)	G	P	igneous and metamorphic rocks	0.2289	25-21199	U
54	130	FRANKLIN ROAD TP	T	P				

5.00

EPTDS ID	Source ID	Source Name	Water System Component *	Source Status *	Source *	Source Capacity (MGD)	Well Permit #	Confinement Status *
54	131	FRANKLIN ROAD (#4)	G	P	igneous and metamorphic rocks	0.1325	25-21843	U
56	145	MONTCLAIR	W	P				
57	149	PVWC//MORRIS COUNTY CONNECTION	W	P				
61	155	NAZARETH WELLS 1, 3A, 4 (MERGE)	T	P				
62	162	AMMERMAN WAY WELL (MERGED FROM	T	S				

***KEY**

Water System Component

G = Ground Water, P = Purchased Surface Water, S = Surface Water, T = Treatment Plant (EPTDS), U = Ground Water Under The Direct Influence of Surface Water, W = Purchased Ground Water. For a complete definition of each source of drinking water, please refer to the Glossary at the end of this report.

Confinement Status

C = Confined, U = Unconfined. For a definition of a confined and an unconfined aquifer please refer to the Glossary at the end of this report. K = Unknown, S = Semi-confined. For the purposes of SWAP both K and S were treated as unconfined wells.

Source Status

C = Recharge, E = Emergency, I = Interim, O = Other, P = Permanent, R = Reserve, S = Seasonal, U = Not in Use/Capped, V = Abandoned/Not Capped, W = Not in Use/Unspecified, X = Not in Use/Mechanical, Y = Not in Use/Contaminated. For a complete definition of each well status category, please refer to the Glossary at the end of this report.

Source

For ground water sources, the name of the aquifer is provided. For surface water sources, the name of the surface water body on which the intake is located is given.

The NJ American Water Company - Short Hills Division contains 12 EPTDS as illustrated in Table 7 (identified by a "T" in the water system component column). Often public water systems treat source water at the EPTDS to ensure the drinking water provided to the public meets Federal and State Drinking Water Standards. Please refer to Appendix A- Attachment 5 for information on the public water system's treatment process.

For public water systems that consist of a combination of well(s) and intake(s), the EPTDS received a ground water EPTDS rating and a surface water EPTDS rating. Even in circumstances where the surface water is blended with ground water, the EPTDS received two separate susceptibility ratings. A separate ETPDS rating is provided for the ground water and the surface water because separate susceptibility models were developed for ground and surface water. Ground water and surface water susceptibility models differ in susceptibility rating score, therefore, the rating results are not on the same scale.

If a facility has only one well or intake contributing to the EPTDS, that EPTDS received the same rating as the well or intake. DEP used the equation below to determine an EPTDS susceptibility rating.

Table 10 provides an example of how the EPTDS ratings were calculated. To review how the EPTDS ratings were calculated for the NJ American Water Company - Short Hills Division, please refer to Appendix A- Attachment 4.

Table 10: Example of an EPTDS Susceptibility Rating Calculation
EPTDS 01

Source	Capacity (MGD)	Source Susceptibility Score Rating (0-20, low to high)	Total = Source Contribution
Well 1	1.09	20	$(1.09 \times 20) = 21.8$
Well 2	1.72	10	17.2
Well 3	0.72	5	3.6
Well 4	1.48	10	14.8
Well 5	0.75	20	15.0
Total Capacity	5.76		72.4
EPTDS Susceptibility Score is $72.4 / 5.76 = 12.6$			

For the above example, the sum of the source contributions for EPTDS 01 (72.4) is divided by the total capacity from all sources (5.76) giving a susceptibility score for the EPTDS of 12.6. The original range for rating sources was 0-5 low, 6-10 medium, 11-20 high. EPTDS 01 susceptibility rating was 12.6; therefore the EPTDS would receive a high rating.

Table 11 lists the susceptibility ratings for each EPTDS for the NJ American Water Company - Short Hills Division.

Table 11: Susceptibility Rating for EPTDS

EPTDS ID	EPTDS Name	Contaminant Category							
		Pathogens	Nutrients	Pesticides	VOCs	Inorganics	Radionuclides	Radon	DBPs
		Rating	Rating	Rating	Rating	Rating	Rating	Rating	Rating
01	CANOE BROOK PLANT #1 (Groundwater)	L	M	L	L	M	M	H	M
02	CANOE BROOKE #2 (Groundwater)	M	H	L	H	M	M	H	M
04	SHORT HILLS WELLS	M	H	M	H	H	M	H	M
05	BALTUSROL	M	H	L	H	M	M	H	M
06	PASSAIC RIVER WELLS	M	H	L	H	H	M	H	M
25	NORTHEAST WELL	M	M	L	H	H	M	H	M
52	KNOLLWOOD ROAD TP	M	M	L	L	L	M	H	M
53	MOUNTAIN VALLEY TP	M	M	L	L	L	M	H	M
54	FRANKLIN ROAD TP	M	M	L	L	L	M	H	M
01	CANOE BROOK PLANT #1 (Surface Water)	H	H	M	M	H	L	L	H
02	CANOE BROOKE #2 (Surface Water)	H	H	M	M	H	L	L	H



Attachment S

ENVIRONMENTAL CONCERNS TRACKING SHEET

page 1

INDUSTRIAL ESTABLISHMENT

Name: Amerace Corporation - ESNA Division
Harvard Industries

ISRA Case Number: 64329
ISRA Case Number: 88A66

POTENTIAL SOURCES OF CONTAMINATION

Drum Storage 2,17	Waste Pile 3	Seepage Pit	Transformer 11	Other: Railroad Spurs 7,18
Discharge 4	Monitor Well 13	Dumpster	Tank Farm	Other: Oil Storage Rm. 19
Potable Well	Floor Drain	Bldg. Decon. 15	Other: Plating Dept. 14	Other: Degreasing Area 22
Roof Drain	Septic System	Asbestos 15	Other: Chip Handling 20	Other: Machine Shops 21
UST 8,9,10,12	Lagoon	Fill Area 16	Other: Wastewater Treatment Area 23	
AST 1,19	Spill 3,5,6	Catch Basin 4	Other: Trenches Pits & Sumps 14,19,23,24	

AOC #: 1 Area of Concern: 3,000 Gallon TCE AST

Potential Pollutants PHC BN VO_X PP METALS AE PCB PP+40 Other Sampling Req'd?: YES

Results of Sampling: Approximately 10 ft. x 10 ft. area of stained soil was observed beneath the tank.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: Tank was removed and approximately 30 cyds of soil was excavated and post-excitation samples collected. Results were ND for VOs. Area backfilled.

Final Outcome: On April 14, 1993, Amerace submitted a comparison of the post-ex sample results to the current NJDEP cleanup guidance levels. The report was referred to the TC on April 19, 1993. 5/12/93 - TC Memo: All soil results < 2/3/94 SCC. NEA originally approved on 8/11/93.

"NEA" App'd: CM Initials MJM Date 8/11/93

AOC #: 2 Area of Concern: Waste Oil Exterior Drum Storage Area (South Drum Storage Area)

Potential Pollutants PHC_X BN VO_X PP METALS_X AE PCB PP+40 Other Sampling Req'd?: YES

Results of Sampling: Approximately a 50 ft. x 45' ft. area of stained soil was observed. 7/6/98 - 4 soil samples collected 7 analyzed for TPHC BN+15 VO+10 PCB & PPM: TPHC up to 22,000; PCBs up to 2.8 ppm. 1/29/99 - 4 Post-X samples collected & analyzed for TPHC & PCB: TPHC: 239-7850 ppm; PCB: ND-169.1 ppm; Additional 6 Post-X samples collected & analyzed for PCB: All ND.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: Drum storage area was relocated to a paved/covered area. Approximately 192 cyds of soil was excavated and post-ex samples were collected. Results were: TPHC: 25 - 960 ppm, VOs: ND, Sb: ND - 26 ppm, As: ND - 1.6 ppm, Be: ND - 0.6 ppm, Cd: ND - 10 ppm, Cr: ND - 9.2 ppm, Cu: ND - 19 ppm, Pb: ND - 30 ppm, Hg: ND - 0.1 ppm, Ni: ND - 15 ppm, Se: ND - 0.1 ppm, Ag: ND - 0.5 ppm, Tl: ND - 6.9 ppm and Zn: ND - 51 ppm. Area backfilled. 7/6/98 - Additional soil contamination identified in soil samples collected under the concrete in this AOC: Revised RAW proposed to excavate contaminated soils. 1/29/99 - Approximately 1000 sq. ft. soil excavated after concrete removed & post-X samples collected, additional 800 sq. ft. excavated when PCB results were found to be elevated; total excavation area approximately 1800 sq. ft. (260 cubic yards of soil).

Final Outcome: Drum Storage Area moved to a new location (North Drum Storage Area (AOC 17 below). On April 14, 1993, Amerace submitted a comparison of the post-ex sample results to the current NJDEP cleanup guidance levels. The report was referred to the TC on April 19, 1993. 5/12/93 - TC Memo recommends NEA. 9/16/93 - Reviewed the RALs for Cd-3, Sb-10 & Tl-5 ppm in effect at time RAW approved (8/87) & compared with levels on-site & 2/3/94 SCCs: Cd average = 2.3, Tl average = 4.6 ppm, Cd & Tl < 8/87 RAL & < 2/4/93 SCC order of magnitude; Sb < 2/4/94 SCC < 8/87 RAL, Sb average = 11.8 ppm; Cd, Sb & Tl < the appropriate RALs. NEA originally approved on 9/16/93. 1/29/99 - 260 cubic yards of soil excavated from area after building and concrete pad removed and properly disposed of. Soil results all < NJDEP's most stringent 5/3/99 Soil Cleanup Criteria.

"NEA" App'd: CM Initials MJM Date 5/11/99

ENVIRONMENTAL CONCERN TRACKING SHEET

Amerace/Harvard Industries
ISRA Case #s 84329/88A66

AOC #: 3 **Area of Concern:** Former Metal Chip Handling Area

Potential Pollutants PHC_X BN_X VO_X PP METALS_X AE PCB PP40 Other Sampling Date

Results of Sampling: Metal shavings were stored on the ground adjacent to railroad tracks. An area approximately 80 ft. x 75 ft. of stained soil was observed. 11/9/93 - Claim remaining Cd in background vegetation. 6/17/94 - Additional "at-peril" sampling proposed to demonstrate background levels. 7/15/94 - Sample results rcvd, Cd contamination not due to background; claim contamination delineated. Additional info rcvd. 5/8/95 - Revised Sample location map rcvd. 2/29/96 - 12 additional sample locations, 10 locations, sampled for Cd: ND-4.1, Cd down to 6' except around Sample B-8 where Cd: 4.1, found at 7.5'. additional delineation required around B-8.

Cleanup Req'd ?: YES If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: Approximately 267 yd³ of soil was excavated and piled in sampler pit. Results were: TPHC: ND - 2,400 ppm, BNS: ND, VOs: ND, Sb: ND - 12 ppm, As: ND - 0.18 ppm, Be: ND - 0.03 ppm, Cd: ND - 11 ppm, Cr: ND - 7.4 ppm, Cu: ND - 28 ppm, Pb: ND - 18 ppm, Hg: ND - 0.03 ppm, Ni: ND - 12 ppm, Zn: ND - 44 ppm. Area backfilled. 11/17/95 - Proposed ACL for Cd @ 39 ppm. ACL proposal premature. 6/19/96 - Reproposed an ACL for Cd @ 39 ppm. 7/10/96 - Ground water results submitted to support ACL proposal had been no impact to ground water. Round Table. No impact to ground water, Cd ACL of 39 ppm for residential soils acceptable. 9/10/97 - BEERA MEMO, Proposed ACLs denied. 10/9/98 - Revised RAW; proposed NFA claiming that source for product contamination is off-site. 1/25/99 - Round Table, review of well boring logs do not support claim. odors noted at two levels above ground water in boring B3. 3/8/99 - Geologist observed the installation of three borings, odors in soil similar to those encountered during the 3/8/99 sampling. 4/13/99 - Soil results from 3/8/99 sample borings: 11' level: no odors, soil cleanup criteria. 4/21/99 - Geologist Memo, no further investigation required, no source area found. contamination, odors in soils appear to be from very old weathered spills.

Final Outcome: 8/7/87 C/P had approved Cd at 3ppm which is < an order of magnitude above 2/3/94 SCC. Approximately 267 yd³ of soil was excavated. 7/30/96 - CD ACL of 39 ppm approved for the facility. Free product in ground water (AOC 13) adjacent to this AOC determined not to be from an on-site source based upon additional soil borings. levels all below 39 ppm ACL.

"NFA" Appv'd: CM Initials MJM Date 4/22/99

AOC #: 4 **Area of Concern:** Surface Water Discharge Point/4 Catch Basins

Potential Pollutants PHC_X BN_X VO_X PP METALS_X AE PCB PP40 Other Sampling Date

Results of Sampling: Discharge of non-contact cooling water to catch basins, which discharge into Lightning Creek under NJPDES/DSW permit No. NJ0003433. Samples collected from the sediments in the catch basins indicate levels of TPHC up to 18,000 ppm, VOs up to 1,300 ppm and PFM. One additional sediment sample was collected from the discharge basin: TPHC - 9,200 ppm; VOs: ND; Sb: <1; As: 2; Be: 0.3; Cd: 27; Cr: 20; Cu: 71; Pb: 50; Hg: 0.12; Ni: 23; Zn: 112. Ag: 5.2; Tl: 5.1; & Zn: 190 ppm. See: 9/28/93 memo to File

Cleanup Req'd ?: YES If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: Approximately 4 cyds of sediment were removed from the catch basins and the basins were cleaned. 1/29/99 - All 4 Catch Basins removed during building demolition, sediments from each basin were removed and properly disposed.

Final Outcome: NJPDES discharge is into a concrete catch basin which then tie into regional storm drain system before emptying into Lightning Creek. Sediments from the catch basin were removed & the basins visibly improved & found to be in good shape. See: 9/28/93 memo to File. NFA originally approved on 10/1/93. 1/29/99 - All 4 Catch Basins removed during building demolition, sediments from each basin were removed and properly disposed.

"NFA" Appv'd: CM Initials MJM Date 4/29/99

AOC #: 5 **Area of Concern:** Base of Utility Pole

Potential Pollutants PHC_X BN_X VO_X PP METALS_X AE PCB PP40 Other Sampling Date

Results of Sampling: Approximately a 4 ft x 4 ft. area of stained soil was observed at the base of the utility pole by the kitchen entrance.

Cleanup Req'd ?: YES If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: Approximately 1 cyd of soil was excavated and piled in sampler pit. Results were TPHC: 49 ppm, VOs: ND and PFM: ND. Area backfilled.

Final Outcome: On April 14, 1993, Amerace submitted a comparison of the 1993 on-site sample results to the NJDEP cleanup guidance levels. The report was referred to the TW on April 19, 1993. Final outcome: result < 2/3/94 SCC, NFA recommended.

"NFA" Appv'd: CM Initials MJM Date 8/11/93

ENVIRONMENTAL CONCERN TRACKING SHEET

Page 3

Amerace/Harvard Industries
ISRA Case # 84329/00A66

AOC #: 6 Area of Concern: Fuel Oil Fill Pipes

Potential Pollutants PHC_X BN_X VO_X PP METALS_X AE PCB PP40 Other Sampling Req'd?: YES

Results of Sampling: Stained soil was observed beneath the fuel oil fill pipes.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: Approximately 2 yd³ of soil was excavated and post-ex samples collected. Results were: TPHC: 1,700 - 4,800 ppm; VOs: ND; BNS: ND and PPMs: ND. Area backfilled.Final Outcome: Approximately 2 yd³ of soil was excavated on April 14, 1993. Amerace submitted a comparison of the post-ex sample results to the current NJDEP cleanup guidance levels. The report was referred to the TC on April 19, 1993. 5/12/93 - TC Memo: All soil results < 2/3/94 SCC, NFA recommended.

"NFA" App'd: CM Initials MJM Date 8/11/93

AOC #: 7 Area of Concern: Outside Railway Spur

Potential Pollutants PHC_X BN_X VO_X PP METALS_X AE PCB PP40 Other Sampling Req'd?: YES

Results of Sampling: Spill/seepage of oil from rear of manufacturing building occurred in this area. 11/9/93 - Claim remaining Cd is background associated with railroad's operation. 6/17/94 - Additional "at-peril" sampling proposed to demonstrate background conditions 7/15/94 - Sample results rec'd. Cd contamination not due to background; claim contamination delineated. 10/13/94 - Additional information rec'd. 5/8/95 - Revised Sample location map rec'd. 2/29/96 - 15 additional samples collected from 12 locations, sampled for Cd: ND-9.3, Cd down to at least 4.5'; additional delineation required around B-19 & B-20 required. 7/10/96 - Ground water results submitted for Cd: ND. 1/29/99 - 8 Post-X samples collected and analyzed for Cd: 0.7 - 1.8 ppm; results all < 5/3/99 Direct Contact Soil Cleanup Criterion of 39 ppm for Cd.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: Soil along the back of the building was excavated down to the clay layer (approximately 3 feet down) and post-ex samples were collected. Results were: TPHC: ND-2,400 ppm, total BNS: ND-5.41 (individual BNS all < 2/3/94 SCC), VOs: ND, Sb: ND-17 (Avg. Sb-11.1), As: ND-5.7, Be: ND-0.2, Cd: ND-380, Cr: ND-120, Cu: ND-67, Pb: ND-80, Hg: ND-0.2, Ni: ND-19, Se: ND-0.36, Ag: ND-2.9, Tl: ND-3 (Avg. Tl: 2.2, NFA for Tl based upon TCs 5/12/93 memo and Order of Magnitude) and Zn: ND-9 ppm. Area backfilled. 11/17/95 - Proposed ACL for Cd @ 39 ppm. ACL proposal premature. 6/19/96 - Reproposed an ACL for Cd of 39 ppm. 7/10/96 - Ground water results submitted to support ACL proposal that there had been no impact to groundwater. 7/30/96 - Round Table, No impact to ground water, Cd ACL of 39 ppm for residential soils acceptable. 2/10/97 - Proposed ACL for Cd of 270/2000 ppm. 6/20/97 - Revised ACL proposal submitted with limited amount of additional information. 9/10/97 - PEERA MEMO, Proposed ACLs denied. 7/6/98 - Revised RAW: proposal to address "hot spot". 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 1/29/99 - Railroad tracks removed, "Hot Spots" around soil samples 56-34 and 56-42 were excavated; a 60'x10'x3.5' area excavated around Sample 56-34 was excavated, an 80'x10'x4.5' area around sample 56-42 was excavated. Approximately a total of 215 cubic yards of soil excavated and disposed of off-site. Area backfilled using "clean" soils from other on-site locations. 5/6/99 - Site inspection, area filled & regraded in preparation for paving of a new road in this area.

Final Outcome: Contaminated area along railroad track excavated to approximately 3' initially excavated. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 1/29/99 - additional 215 yd³ soil excavated; Cd levels all below 39 ppm ACL; area backfilled re-using materials from other on-site locations.

"NFA" App'd: CM Initials MJM Date 5/17/98

AOC #: 8 Area of Concern: 5,000 Gallon #2 Fuel Oil UST

UST# 0103616-T-9

Potential Pollutants PHC_X BN_X VO_X PP METALS_X AE PCB PP40 Other Sampling Req'd?: YES

Results of Sampling: Tank had initially tested tight in October, 1984 prior to CPA. 1/29/99 - Tank visually inspected when removed, no evidence of any holes; PID readings in excavation were all Zero and no visually evidence of any staining noted in soils used to justify no additional sampling.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? YES

Cleanup Actions Req'd or Completed: UST was abandoned in place, due to structural constraints, in August 1990. Six borings were collected beneath the invert of the tank and adjacent to the sides of the tank. Results were: TPHC: 367 ppm - 3,950 ppm; BNS: ND - 5.6 ppm and CaPAHs: ND. In a 6/3/92 letter, DEPE required an additional sample be collected for VOs. Sample was collected July 1992. Results were VOA: ND. 7/6/98 - Revised RAW: UST to be removed as part of building demolition and site redevelopment. 9/28/98 - UST Closure Application. 9/14/98 - NJDEP approves UST Closure. 1/29/99 - UST excavated & removed from site.

Final Outcome: On April 14, 1993, Amerace submitted a comparison of the post-ex sample results to the current NJDEP cleanup guidance levels. The report was referred to the TC on April 19, 1993. 5/12/93 - TC Memo: All soil results < 2/3/94 SCC. Reviewed 11/13/90 report, UST up against wall of building, pictures show piping sticking out through excavation wall - no need for PE report. Tank dewatered. UST originally received NFA on 9/14/93. 1/29/99 - UST excavated & removed from site; no visual or PID evidence of any spills or discharges & prior sampling results used as justification to close excavation without additional post-X sampling.

"NFA" App'd: CM Initials MJM Date 5/17/99

ENVIRONMENTAL CONCERNS TRACKING SHEET

Page 4

Amerace/Harvard Industries
ISRA Case # 84129/89A66

AOC #: 9 Area of Concern: (2) 6,000 gallon Cutting Oil USTs and (1) 2,000 gallon Kerosene UST
USTs # 0188616-T-6 through T-8; MW-14 installed adjacent to USTs

Potential Pollutants PHC_X_BN__VO__PP METALS__AE__PCB__PP440__Other__BTX__ Sampling Req'd?: YES

Results of Sampling: Tanks had initially tested tight in October 1984 prior to CPA. 7/6/98 - 18 soil samples analyzed for TPHC: 213 - 26,300 ppm; 17 soil samples analyzed for BTEX, 1 soil sampled analyzed for naphthalene, and 1 soil sample analyzed for PAH's all results, NJDEP's 5/3/99 most stringent soil cleanup criteria. 1/29/99 - 5 Post-X samples collected 7 analyzed for TPHC: 31 - 478 ppm.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? YES

Cleanup Actions Req'd or Completed: Tanks were abandoned in place due to structural constraints in April/May, 1991. 5 borings were collected adjacent to each tank. Results were: TPHC: 134 - 26,300 ppm, benzene: ND - 0.005 ppm, toluene: ND - 0.65 ppm and xylenes: ND - 3.3 ppm. In a 6/3/92 letter, NJDEP required additional borings for TPHC, naphthalene, PAH and VOs were elevated TPHCs had previously been observed. Samples were collected in July 1992. Results were: TPHC: 213 - 191 ppm, Naphthalene: ND, PAHs: ND - 0.242 ppm and VOs: ND. 11/10/93 - contaminated soil volume estimates rec'd: 15 yd³ (21 tons) adjacent to cutting oil USTs & 16.25 yd³ (22.8 tons) adjacent to kerosene UST. Ground Water - This AOC was originally a suspect for contamination found in MWs ESNA-12 & ESNA-16, Monitoring Well ESNA-14 installed in Area, GW 8 34'. Ground water addressed under AOC 13 below; 12/22/94 - Geologist Memo, No impact to Ground water from these USTs. Monitoring Well ESNA-14 to be sealed. 7/6/98 - Revised RAW: UST to be removed as part of building demolition and site redevelopment. 7/6/98 - Revised RAW: UST to be removed as part of building demolition and site redevelopment. 8/28/98 - UST Closure Application. 9/14/98 - NJDEP approves UST Closure. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 1/29/99 - USTs excavated & approximately 65 yd³ soil removed from site; area backfilled using recycled on-site materials.

Final Outcome: All 3 USTs originally abandoned in place, all USTs were subsequently removed when the build was demolished; soil contamination above residential levels to remain on-site underneath building, contaminated soil volume estimates: 15 yd³ (21 tons) adjacent to cutting oil USTs & 16.25 yd³ (22.8 tons) adjacent to kerosene UST; Tanks Delisted. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 1/29/99 - USTs excavated & approximately 65 yd³ soil removed from site; area backfilled using recycled on-site materials. All soil results < NJDEP's 5/3/99 most stringent soil cleanup criteria.

"NFA" App'd: CM Initials MJM Date 5/18/99

AOC #: 10 Area of Concern: 1,500 Gallon Gasoline UST UST # 0188616-T-4
Potential Pollutants PHC_X_BN__VO__PP METALS__AE__PCB__PP440__Other__BTX__ Sampling Req'd?: YES

Results of Sampling: Tank had initially tested tight in October, 1984 prior to CPA.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? YES

Cleanup Actions Req'd or Completed: Tank was removed in December, 1989 and five post-ex samples were collected. Results were: TPHC: 73.6 - 123 ppm, benzene: ND, toluene: ND and xylene: ND. Area backfilled.

Final Outcome: On April 14, 1993, Amerace submitted a comparison of the post-ex sample results to the current NJDEP cleanup guidance levels. The report was referred to the TC on April 19, 1993. 5/12/93 - TC Memo: All soil results < 2/3/94 SCC, NFA recommended. Tank delisted.

"NFA" App'd: CM Initials MJM Date 8/11/93

AOC #: 11 Area of Concern: Transformer
Potential Pollutants PHC__BN__VO__PP METALS__AE__PCB__PP440__Other__ Sampling Req'd?: NO

Results of Sampling: Transformer is non-PCB containing and is located on a concrete pad. No staining was observed during a 2/20/85 site inspection.

Cleanup Req'd?: NO If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: N/A

Final Outcome: Transformer is non-PCB containing. No evidence for any spills or discharges. Limited potential for any concern. 12/17/98 - Site Inspection: All building and pads removed from the site.

"NFA" App'd: CM Initials KMK Date 4/20/93

ENVIRONMENTAL CONCERNS TRACKING SHEET

Page 5

Amerace/Harvard Industries
ISRA Case #s 84329/88A66

AOC #: 12 **Area of Concern:** 3 Fuel Oil USTs

USTs #s 0100616-T-1 through T-3

Potential Pollutants: PHC ☐ BN ☐ VO ☐ PP METALS ☐ AE ☐ PCB ☐ PP-40 ☐ Other ☐ **Sampling Req'd ?:** NO

Results of Sampling: Tanks tested tight in October 1984 and are currently in use by the current owner/operator Harvard Industries. Soil sampling on-site for other AOCs addressed concern for ISRA Case 88A66. 7/6/98 - 6 soil samples collected from around these USTs & analyzed for TPHC: 59 - 6988 ppm; 7 soil samples analyzed for PAHs: all < NJDEP's most stringent soil cleanup criteria. 1/29/99 - 24 Post-X soil samples collected & analyzed for TPHC: up to 16,400 ppm; two soil samples with highest TPHC results also analyzed for VO:10: all < NJDEP's most stringent soil cleanup criteria. 3 additional Post-X samples collected & analyzed for TPHC: 853 - 5420 ppm; soil sample with the highest TPHC result also analyzed for VO:10: all < NJDEP's most stringent soil cleanup criteria.

Cleanup Req'd ?: NO **If YES, Cleanup under CP Approval?** NO

Cleanup Actions Req'd or Completed: 7/6/98 - Revised RAW; UST to be removed as part of building demolition and site redevelopment. 7/6/98 - Revised RAW; UST to be removed as part of building demolition and site redevelopment. 8/28/98 - UST Closure Application. 9/14/98 - NJDEP approves UST Closure. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 1/29/99 - USTs excavated & removed from site. Pin holes were noted in two of the USTs removed, visually contaminated soil excavated down to 17'; Additional soil excavated down to 22' based upon sampling results. Approximately 1200 yd³ contaminated soil excavated & removed from the site. Area backfilled using recycled materials from other on-site areas.

Final Outcome: Tanks currently in use; Integrity tested tight in October, 1984 for ISRA Case #84329; Soil sampling on-site for other AOCs addressed concern for ISRA Case 88A66. USTs originally received NFA by JOR 4/30/93. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 1/29/99 - 3 USTs excavated & removed from site, approximately 1200 yd³ contaminated soil excavated & removed from the site. Area backfilled using recycled materials from other on-site areas. Soil results all < NJDEP's 5/3/99 most stringent soil cleanup criteria.

"NFA" App'd: CM Initials MJM Date 5/18/99

AOC #: 13 **Area of Concern:** Ground Water (see attached map for well locations)
NJDEP Permits - Company received a Major Modification to a Surface Water Permit (NJ0003433) for the Ground Water Monitoring. On March 31, 1995 the combined permit was split with DSW to remain under Permit #NJ0003433 and the Ground Water to be covered by a new permit #NJ0108685, in preparation for permit revocation.

Potential Pollutants: PHC ☐ BN ☒ VO ☒ PP METALS ☐ AE ☐ PCB ☐ PP-40 ☐ Other ☐ **Sampling Req'd ?:** YES

Results of Sampling: A NJPDES/DGW for detection monitoring was issued to the facility (permit No. NJ0003433) for quarterly ground water monitoring. Upgradient monitoring wells, ESNA-2, ESNA-4, ESNA-9D and ESNA-10, detected up to 4 ppm VOs. Upgradient property owner, Red Devil, is currently undergoing an active ground water cleanup (emergency NJPDES/DGW was issued January 1993) and has been identified as the source of the upgradient contamination (Metro Enforcement Office lead, Red Devil Case #930628SP02M).

Cleanup Req'd ?: YES **If YES, Cleanup under CP Approval?** YES

Cleanup Actions Req'd or Completed: CPA required the removal of free product from ESNA-12 and ESNA-16 and quarterly monitoring of the ground water. Passive skimmers are currently installed in the wells and free product is being removed. The NJDEP suspended the requirement for quarterly ground water sampling in a March 16, 1993 BEECRA letter and a March 30, 1993 NJPDES program letter. Two of the three on-site production wells #2 and 3 were sealed 3/18/93 (well abandonment reports submitted 4/14/93). 11/10/93 - Problem with passive oil filter system in ESNA 16; ESNA 12 to be re-installed, no recovery this quarter. 1/18/94 - ESNA 12 re-installed; still have clogging problem in the filtering systems for ESNA 12 & 16, no recovery this quarter, filters to be changed. 6/17/94 - ESNA 12A installed to replace ESNA 12; claims problems with product recovery system corrected. 7/15/94 - Modified product recovery system in operation since February 94 has improved collection of free product, high variability in product collection frequency and amount of product collected. 10/13/94 - Company agrees to begin biweekly collection of product from both wells ESNA-12A & ESNA-16, modification to collection system appears to have corrected problem. Proposal to seal all monitoring wells and piezometers except ESNA-12A & ESNA-16. 1/16/95 - Biweekly collection of product started on 9/15/94, 1.1 gal of product collected from ESNA-12A during this period. Company to continue with biweekly collection. 9/13/95 - Estimated 62.23 gal. free product on GW, at current removal rate remediation of free product will not be completed until early 1999. 11/17/95 - Prior pump testing results have demonstrated that active methods to remove product were not possible due to poor aquifer yields. 2/28/96 - ROUND TABLE, additional recovery wells installed with passive skimmers required; Determine if Cd is impacting Ground water; ESNA-8 ESNA-13S & ESNA-17 are to remain open, replace MW-9 if closed by Abex. 6/19/96 - Abex MW-9 sealed, ESNA-8 accidentally sealed; proposal to replace these wells with new ESNA-8B, ESNA-13S sampled for Cd: ND, no Cd impact to ground water. 7/30/96 - Round Table location for replacement well ESNA-8B acceptable. 10/9/98 - Revised RAW; proposed NFA claiming that source for free product contamination is off-site. 1/25/99 - Round Table, review of well boring logs do not support claim, further soil and ground water investigation required. 3/8/99 - Geologist observed the installation of three borings, strong odors noted at two levels above ground water in boring B3. 4/1/99 - NJDEP requires additional investigation. 4/9/99 - Geologist observed the installation of three additional borings, odors in soil similar to those encountered during the 3/8/99 sampling. 4/13/99 - Soil results from 3/8/99 sample borings: all < most stringent soil cleanup criteria. 4/21/99 - Geologist Memo, no further investigation required, no source area found for contamination, odors in soils appear to be from very old weathered spills.

Final Outcome: Harvard/Amerace site not the source for either ground water plume. NJDEP has determined that Red Devil is the source of the chlorinated ground water plume and that an unidentified off-site source, most likely source is from the adjacent Municipal Garage, is the source of the oil free product. Referrals being made to the appropriate Bureau to address this contamination plume. All wells sealed.

"NFA" App'd: CM Initials MJM Date 4/22/99

ENVIRONMENTAL CONCERN TRACKING SHEET

Page 6

Aeracore/Harvard Industries
ISRA Case # 94329/80A66

AOC #: 14 Area of Concern: Plating Department, including 1 large pit and 3 trench systems

Potential Pollutants PHC BN VO PP METALS AE PCB PP40 Other Sampling Req'd?: YES

Results of Sampling: 1/23/97 - DEP receives "Concerned Citizen" letter reporting the use of Ag, Cd, Cu, Cr, Ni & Zn in Plating Department for over 50 years, expressed concern for potential impact to soils. 2/10/97 - Submission of preliminary investigation in this area; Cd: 15.5-1320; Hex Cr: 5.3-461; Ni: 3.3-632; & Zn: 41.5-1550; no QA/QC documentation. 6/20/97 - Company claims Preliminary Investigation performed by potential purchaser of property and required information not provided. 11/26/97 - RIW proposed to delineate metal and VO contamination in soils. 12/11/97 - Revised RIW to investigate VO's in ground water only. 12/22/97 - Round Table review for ground water RIW. 3/19/98 - Ground water results submitted from two well points, 1-ungradient & 1-downgradient from this AOC to evaluate if this AOC may have contributed to the regional chlorinated solvent contamination. 4/7/98 - Round Table, ground water results show chlorinated levels decreasing from upgradient to down gradient locations; appears to have been no impact from this AOC on the chlorinated plume. 1/29/99 - 23 Post-X samples collected and analyzed for Cd, Hex Cr, Ag and Ni: all results < NJDEP's 5/3/99 most stringent soil cleanup criteria.

Cleanup Req'd?: YES or NO If YES, Cleanup under CP Approval? YES or NO

Cleanup Actions Req'd or Completed: 2/10/97 - Proposed ACL for Cd of 270/2000 ppm. 6/20/97 - Revised ACL proposal submitted with limited amount of additional information. 9/30/97 - BEERA MEMO, Proposed ACLs denied. 7/6/98 - Revised RAW area to be addressed as part of the building demolition. Soils will be treated to make them non-hazardous for disposal. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 12/14/98 - Site Inspection, building removed. 1/29/99 - Building demolished and the contaminated/visually stained concrete disposed of off-site. Entire 8000 ft² floor area of Plating Room was excavated to depths between 2 & 14", an additional small area was excavated north of plating room. Approximately 4600 tons of soil treated, 600 tons treated for Hex Cr, approximately 2000 tons of cobbles removed during treatment and included other recycled building materials. Remaining 2600 tons disposed of off-site. Area backfilled using recycled materials from other on-site areas.

Final Outcome: Building demolished, contaminated concrete floor removed & properly disposed of off-site, approximately 4600 tons contaminated soil excavated & treated to make it non-hazardous, including 600 tons of Hex Cr contaminated soil, prior to disposal. 2000 tons of cobbles removed from the soil during treatment and reused on-site. 2600 tons of soil properly disposed of off-site. Post-X results all < NJDEP's 5/3/99 most stringent soil cleanup criteria.

"NFA" App'd: CM Initials MJM Date 5/18/99

AOC #: 15 Area of Concern: General Building Decontamination (Asbestos, Lead Paint, Floor Washings)

Potential Pollutants PHC BN VO PP METALS AE PCB PP40 Other Sampling Req'd?: YES

Results of Sampling: 7/6/98 - Revised RAW, Asbestos and lead paint identified inside building.

Cleanup Req'd?: YES or NO If YES, Cleanup under CP Approval? YES or NO

Cleanup Actions Req'd or Completed: 7/6/98 - Revised RAW, proposal to remove asbestos & lead paint prior to building demolition. 8/19/98 - Site Inspection, Floors being power washed prior to building demolition. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 12/17/98 - Site Inspection, Building removed. 1/29/99 - Final RAR, disposal documentation for these materials submitted.

Final Outcome: Prior to building demolition building decontamination included the removal of asbestos and lead paint from inside the building and power washing of the floors. Materials properly disposed of off-site & building demolished.

"NFA" App'd: CM Initials MJM Date 4/22/99

AOC #: 16 Area of Concern: Fill Area, small parking area on Swanstrom Place near Vauxhall Road

Potential Pollutants PHC BN VO PP METALS AE PCB PP40 Other Sampling Req'd?: YES

Results of Sampling: 7/6/98 - Revised RAW, fill materials found in 3 soil borings in this area, samples analyzed for BN+15 VO+10 PPM PCBs & TPHs, reported Cd up to 43.7 ppm; Benzo(a)pyrene up to 1.6 ppm; Benzo(b)fluoranthene up to 2.4 ppm; Benzo(k)fluoranthene up to 0.9 ppm. 1/29/99 - Final RAR, 8 post-excavation samples collected & analyzed for Cd & PAHs, All < NJDEP's 5/3/99 most stringent soil cleanup criteria.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? YES

Cleanup Actions Req'd or Completed: 7/6/98 - Revised RAW, proposal to excavate area and collect post-excavation samples. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 12/17/98 - Site Inspection, area excavated but not back filled. 1/29/99 - Final RAR, Irregular Shaped Area approximately 30'x15'x11' excavated material disposed of off-site; excavation backfilled with materials from other on-site areas. 5/6/99 - Site Inspection, Area backfilled with crushed building material.

Final Outcome: Approximately 30'x15'x11' deep area of fill materials excavated and disposed of off-site. All Post-excavation sample results < NJDEP's 5/3/99 most stringent soil cleanup criteria. Area backfilled using crushed building materials from other on-site areas.

"NFA" App'd: CM Initials MJM Date 5/11/99

Amerace/Harvard Industries
ISPA Case 85-81329/09A06

AOC #: 17 Area of Concern: North Drum Storage Area

Potential Pollutants PHC ___ BN ___ VO ___ PP METALS ___ AE ___ PCB ___ PP+40 ___ Other ___ Sampling Req'd?: YES

Results of Sampling: 7/6/98 - Revised RAW. 2 soil sample collected from underneath concrete and analyzed for BN+15 VO+10 PPM PCBs & TPH, reported Cd up to 2.4 ppm. 8/19/98 - Site Inspection, concrete in good condition.

Cleanup Req'd?: NO If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: N/A

Final Outcome: The North Drum Storage Area replaced the South Drum Storage Area (AOC 2 above) after remediation was required to address soil contamination in the South Area. Concrete in this area in good condition. Cd levels (up to 2.4 ppm) found in soils beneath the concrete in this AOC is below the 59 ppm ACL. Limited potential for any concern.

"NRA" App'd: CM Initials MJM Date 2/1/99

AOC #: 18 Area of Concern: Former Interior Railroad Spur, southwest corner; AOC identified in 7/6/98 RAW

Potential Pollutants PHC ___ BN ___ VO ___ PP METALS ___ AE ___ PCB ___ PP+40 ___ Other ___ Sampling Req'd?: YES

Results of Sampling: 7/6/98 - 6 Soil Borings collected from along rail line: TPHC up to 17,000 ppm; PCBs up to 36 ppm; Benzo(a)anthracene up to 6.2 ppm; Benzo(a)pyrene up to 6.6 ppm; Benzo(b)fluoranthene up to 6.5 ppm; Benzo(k)fluoranthene up to 5.1 ppm; Dibenz(a,h)anthracene up to 3.2 ppm; Ideno(1,2,3-cd)pyrene up to 5.3 ppm. 1/29/99 - Post-X samples collected & analyzed for TPHC: 493 - 1580 ppm; PCBs: 0.27 - 0.41 ppm; PAHs all < NJDEP's 5/3/99 most stringent soil clean up criteria. 1 composite sample of sand used originally as backfill along the railroad spur was analyzed for TPHC & PPM: TL - 2.6 ppm.

Cleanup Req'd?: YES or NO If YES, Cleanup under CP Approval? YES or NO

Cleanup Actions Req'd or Completed: 7/6/98 - Revised RAW, area to be excavated & post-X samples to be collected. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 1/29/99 - Original Backfill sand reused on-site. Approximately a 200'x10'x4' area of contaminated soils below the former railroad spur was excavated after sand backfill removed, building walls used as boundaries on 3 sides.

Final Outcome: Approximately 300 cu. yd. soils excavated & removed from below former railroad spur after the sand backfill covering it removed and staged on-site for re-use. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. Area backfilled reusing on-site generated materials. Post-X samples all < NJDEP's 5/3/99 most stringent soil cleanup criteria.

"NRA" App'd: CM Initials MJM Date 5/17/99

AOC #: 19 Area of Concern: Oil Storage Room, including 2 - 5000 gal. ASTs, 1 concrete trench & 2 pits

Potential Pollutants PHC ___ BN ___ VO ___ PP METALS ___ AE ___ PCB ___ PP+40 ___ Other ___ Sampling Req'd?: YES

Results of Sampling: 7/6/98 - Stained concrete noted; 1 soil boring installed adjacent to each pit & trench, samples analyzed for TPHC BN+15 VO+10 PCB & BTM: TPHC up to 30,000 ppm; TCE up to 1.5 ppm, contamination associated with the 2 pits. 1/29/99 - 4 post-X samples collected & analyzed for TPHC: 30 - 4950 ppm.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? YES

Cleanup Actions Req'd or Completed: 7/6/98 - ASTs removed when operations ceased. Proposal to excavate trench & pits. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 1/29/99 - Building demolished. Visually stained concrete demolished & removed from the site. Excavation of both pits combined into 1 excavation due to their proximity, approximately 35 yd' soil removed. Area backfilled using recycled materials from other on-site areas.

Final Outcome: Building demolished, both ASTs & associated piping removed, visually stained concrete removed from site & properly disposed. Approximately 35 yd' soil removed. Area backfilled using recycled materials from other on-site areas.

"NRA" App'd: CM Initials MJM Date 5/17/99

ENVIRONMENTAL CONCERN TRACKING SHEET

Page 6

Abercrombie/Harvard Industries
ISRA Case # 84329/88A4

AOC #: 20 Area of Concern: Interior Ship Handling Area & Unidentified Basement Area beneath it

Potential Pollutants: PHC ___ BN ___ VO ___ PP METALS ___ AE ___ PCB ___ PP40 ___ Other ___ Sampling Req'd?: YES

Results of Sampling: 7/6/98 - 1 soil boring collected in this AOC (B-65) & analyzed for TPHC, VO+10, PAHs & PPM: TPHC: 15,000 ppm; all other results < NJDEP's most stringent soil cleanup criteria. 3 additional soil samples collected from an inside area just beyond this AOC & analyzed for TPHC, VO+10, BN+15, PHC & PPM: TPHC: 34 - 40 ppm; all other results ND or < NJDEP's most stringent soil cleanup criteria. 1/29/99 - 7 Post-X samples collected from each area & analyzed for TPHC: 28 - 1680 ppm only based upon prior sampling results.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? YES

Cleanup Actions Req'd or Completed: 7/6/98 - Revised RAW, area to be excavated as part of building demolition. 8/19/98 - Site Inspection. Floors being powered washed prior to building demolition. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 12/17/98 - Site Inspection, Building removed. 1/29/99 - A small 10'x10' basement area was uncovered during the removal of the floor in this area, the existence of this basement area was not known prior to this time. A second oil stained concrete block wall was then found approximately 4' north of the first basement wall when the first north wall was removed. A narrow band approximately 10' long of staining was noted from the underside of the concrete basement floor in this area. Approximately 120 ft² area to a depth of 10' excavated. A second area of approximately 80 ft² to a depth of 8' was excavated in the vicinity of sample location B-65. Total volume excavated from the two areas 80 yd³. Areas backfilled using recycled materials from other on-site areas.

Final Outcome: a total of approximately 80 yd³ of TPHC contaminated soils excavated from two areas and properly disposed of. Post-X results all < NJDEP's most stringent soil cleanup criteria. Areas backfilled using recycled materials from other on-site areas.

"MFA" App'd: CM Initials MJM Date 5/19/99

AOC #: 21 Area of Concern: 4 Former Machine Shop Areas

Potential Pollutants: PHC ___ BN ___ VO ___ PP METALS ___ AE ___ PCB ___ PP40 ___ Other ___ Sampling Req'd?: YES

Results of Sampling: 7/6/98 - 1 Soil boring installed at each Shop location (4 borings total) & analyzed for TPHC, VO+10 & PPM, 1 location also analyzed for BN+15 (B-37): TPHC: <100 - 990 ppm; TCE: 14 ppm (B-37) & 16 ppm (B-38). 1/29/99 - TCE contamination was suspected to be restricted just to below the concrete floor; soil sample collected at 5.0-5.5' at both B-37 & B-39 locations: TCE < 1 ppm at both locations.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? YES

Cleanup Actions Req'd or Completed: 7/6/98 - Revised RAW, sump to be excavated as part of building demolition. 8/19/98 - Site Inspection. Floors being powered washed prior to building demolition. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 12/17/98 - Site Inspection, Building removed. 1/29/99 - Floor in these areas removed as part of the general building decontamination.

Final Outcome: Floors powered washed prior to building demolition. TCE levels rapidly decreased from just below the concrete floor (14 & 16 ppm) to <1.0 ppm at 5', ground water @ 27' below surface no suspected impact to ground water from these areas.

"MFA" App'd: CM Initials MJM Date 5/19/99

AOC #: 22 Area of Concern: 3 Degreasing Area

Potential Pollutants: PHC ___ BN ___ VO ___ PP METALS ___ AE ___ PCB ___ PP40 ___ Other ___ Sampling Req'd?: YES

Results of Sampling: 7/6/98 - 4 soil borings (B-41 - B-44) collected from the three areas & analyzed for TPHC, VO+10 & PPM: TPHC: 66 - 34,000 ppm (B-41); TCE: up to 130 ppm (B-41); Cd: up to 4.2 ppm (B-41). 1/29/99 - 3 Post-X samples (2 side wall & 1 bottom) collected & analyzed for TPHC & VO+10: TPHC: 943 - 5210 ppm; TCE: 0.22 - 1.31 ppm (0.22 ppm found in excavation bottom sample).

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? YES

Cleanup Actions Req'd or Completed: 7/6/98 - Revised RAW, floor removed as part of building demolition. 8/19/98 - Site Inspection. Floors being powered washed prior to building demolition. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 12/17/98 - Site Inspection, Building removed. 1/29/99 - Area around B-41 & B-42 excavated to a depth of 4'; approximately 55 yd³ soil excavated. Area backfilled using recycled materials from other on-site areas.

Final Outcome: Floors removed as part of building demolition, contaminated soil excavated to a depth of 4', approximately 55 yd³ soil excavated in the area samples B-41 & B-42. TCE levels at bottom of 0.22 ppm at bottom of excavation, ground water @ 27' below surface no suspected impact to ground water from these areas. Area backfilled using recycled materials from other on-site areas. All Cd levels below ACL of 10 ppm.

"MFA" App'd: CM Initials MJM Date 5/19/99

ENVIRONMENTAL CONCERN TRACKING SHEET

Page 9

Amersco/Harvard Industries
ISRA Case #: 84329/08A66

AOC #: 23 Area of Concern: Wastewater Treatment Area, including sump

Potential Pollutants PHC ___ BN ___ VO ___ PP METALS ___ AE ___ PCB ___ PF+40 ___ Other ___ Sampling Req'd?: YES

Results of Sampling: 7/6/98 - 2 Soil samples collected in area & analyzed for PPM: Cd: 0.2 - 4.7 ppm. Proposal to collect Post-X samples after sump removed. 1/29/99 - 2 Post-X samples collected & analyzed for Cd: 2.2 - 2.4 ppm. Cd results < approved ACL of 39 ppm.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? YES

Cleanup Actions Req'd or Completed: 7/6/98 - Revised RAW, sump to be excavated as part of building demolition. 8/19/98 - Site Inspection, Floors being powered washed prior to building demolition. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 12/17/98 - Site Inspection, Building removed. 1/29/99 - Sump removed, approximately 5'x5'x3' area excavated. Area backfilled using recycled materials from other on-site areas.

Final Outcome: Treated Wastewater was either reused or discharged into the regional sewer system. Building, including sump demolished, sump excavation approximately 5'x5'x3'; area backfilled using recycled materials from other on-site areas. Cd results all < approved ACL of 39 ppm.

MHA App'd: CM Initials MJM Date 5/19/99

AOC #: 24 Area of Concern: Additional Trenches, Pits & Sumps

Potential Pollutants PHC ___ BN ___ VO ___ PP METALS ___ AE ___ PCB ___ PF+40 ___ Other ___ Sampling Req'd?: YES

Results of Sampling: 7/6/98 - 6 soil borings collected from 4 additional locations inside building & analyzed for TPHC, VO+10, BN+15 & PPM: Cd: up to 5.7 ppm; all other results < NJDEP's most stringent soil cleanup criteria.

Cleanup Req'd?: YES If YES, Cleanup under CP Approval? NO

Cleanup Actions Req'd or Completed: 7/6/98 - Revised RAW, sump to be excavated as part of building demolition. 8/19/98 - Site Inspection, Floors being powered washed prior to building demolition. 11/2/98 - NJDEP, Bureau of Resource Recovery & Technical Programs letter approving the on-site reuse of building demolition materials. 12/17/98 - Site Inspection, Building removed. 1/29/99 - All Trenches, Pits & Sumps removed as part of the building demolition, no post-X sampling was required based upon prior results.

Final Outcome: All Trenches, Pits & Sumps were removed as part of the building demolition, no post-X sampling was required based upon prior results. Cd results all < approved ACL of 39 ppm, all other results < NJDEP's most stringent soil cleanup criteria.

MHA App'd: CM Initials MJM Date 5/19/99



State of New Jersey

Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

David Farer
Farer Persko
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Re: Entire Site, Unrestricted use
No Further Action Letter and Covenant Not to Sue
Industrial Establishment: Americe Corp. Division of Harvard Industries
Former Elastic Stop Nut of America Facility
(a/k/a: K. Hovnanian at Union Township I, Inc.)
2330 Vauxhall Road
Union Township, Union County 07083
ISRA Case #: ER4329
Block: 5009, Lot: 3 and 6
Block: 5001, Lot: 17
ISRA Transaction: Property Sale and Sale of Business
ISRA Case #: ER5A66
Block: 5009, Lot: 3 and 6
ISRA Transaction: Stock Transfer
KCSL #: NJD002197200
Final Remedial Action Report, Dated: January 29, 1999

May 5, 1999

Dear Mr. Farer:

Pursuant to N.J.S.A. 58:10B-13.1 and N.J.A.C. 7:26C, the New Jersey Department of Environmental Protection (Department) makes a determination that no further action is necessary for the remediation of the industrial establishment as specifically referenced above, except as noted below, so long as K. Hovnanian at Union Township I, Inc. did not withhold any information from the Department. This action is based upon information in the Department's case file and K. Hovnanian at Union Township I, Inc. final certified report, dated January 29, 1999. In issuing this No Further Action Determination and Covenant Not to Sue, the Department has relied upon the certified representations and information provided to the Department.

By issuance of this No Further Action Determination, the Department acknowledges the completion of a Remedial investigation and Remedial Action pursuant to the Technical Requirements for Site Remediation (N.J.A.C. 7:26E) for the industrial establishment.

NO FURTHER ACTION CONDITIONS

As a condition of this No Further Action Determination K. Hovnanian at Union Township I, Inc. as well as each subsequent owner, lessee and operator (collectively Successors) shall comply with each of the following:

Name and Address Changes

Pursuant to N.J.S.A. 58:10B-12, K. Hovnanian at Union Township I, Inc. and the Successors shall inform the Department in writing whenever its name or address changes, within 14 calendar days after the change.

Well Sealing

Pursuant to N.J.S.A. 58-4A, K. Hovnanian at Union Township I, Inc. and the Successors shall properly seal all monitoring wells installed as part of a remediation that will no longer be used for ground water monitoring. Wells shall be sealed by a certified and licensed well driller in accordance with the requirements of N.J.A.C. 7:9-9. The well abandonment forms shall be completed and submitted to the Bureau of Water Allocation. Please call (609) 984-6851 for forms and information.

COVENANT NOT TO SUE

The Department issues this Covenant Not to Sue pursuant to N.J.S.A. 58:10B-13.1. That statute requires a covenant not to sue with each no further action letter. However, in accordance with N.J.S.A. 58:10B-13.1, nothing in this Covenant shall benefit any person who is liable, pursuant to the Spill Compensation and Control Act (Spill Act), N.J.S.A. 58:10-23.11, for cleanup and removal costs and the Department makes no representation by the issuance of this Covenant, either express or implied, as to the Spill Act liability of any person.

The Department covenants, except as provided in the preceding paragraph, that it will not bring any civil action against the following:

- (a) the person who undertook the remediation;
- (b) subsequent owners of the subject property;
- (c) subsequent lessees of the subject property; and subsequent operators at the subject property, for the purposes of requiring remediation to address contamination which existed prior to the date of the final certified report for the real property at industrial establishment, identified above, or payment of cleanup and removal costs for such additional remediation.

Pursuant to N.J.S.A. 58:10B-13.1d, this Covenant does not relieve any person from the obligation to comply in the future with laws and regulations. The Department reserves its right to take all appropriate enforcement for any failure to do so.

The Department may revoke this Covenant at any time after providing notice upon its determination that either: any person with the legal obligation to comply with any condition in this No Further Action Letter has failed to do so; or

- (a) any person with the legal obligation to maintain or monitor any engineering or institutional control has failed to do so.

This Covenant Not to Sue, which the Department has executed in duplicate, shall take effect immediately once the person who undertook the remediation has signed and dated the Covenant Not to Sue in the lines supplied below and the Department has received one copy of this document with original signatures of the Department and the person who undertook the remediation.

K. Hovanian at Union Township I, Inc.

Name:

Thomas Piscitelli

Signature:

Thomas Piscitelli

Title:

President

Dated:

May 6, 1999

NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Name: Wayne C. Howitz

Signature:

Wayne C. Howitz

Title:

Assistant Director, Industrial Site Evaluation Element

Dated:

5/5/99

NOTICES

Off-site Contamination

Please be advised that volatile organic pollution in the ground water at this site exists above the Ground Water Quality Standards (N.J.A.C. 7:9-6) which may limit ground water use at this site. It has been determined that this contamination is from a source unrelated to this site. This ground water contamination is being addressed under Case #: 93-06-28-SP02M, CSL ID#: NJD002136232.

In addition, a petroleum hydrocarbon pollution in the ground water at this site exists above the Ground Water Quality Standards (N.J.A.C. 7:9-6) which may limit ground water use at this site. It has been determined that this contamination is from a source unrelated to this site. The presence of this ground water contamination has been referred to the Bureau of Field Operations' Case Assignment Section for review and further action.

Direct Billing

Please be advised that pursuant to the Procedures for Department Oversight of the Remediation of Contaminated Sites (N.J.A.C. 7:26C et. seq.) K. Hovanian at Union Township I, Inc. is required to reimburse the Department for oversight of the remediation. The Department will be issuing a bill within the next four months.

Thank you for your attention to these matters. If you have any questions, please contact me at (609) 984-1351.

Sincerely,

Wayne C. Howitz

Wayne C. Howitz, Assistant Director
Industrial Site Evaluation Element

c: BEECRA File Copy
Union Township Health Department
CEHA Agency
Michael Mandracchia, NJDEP-BEECRA
Helen Duder, NJDEP-BGWPA
Mayor/Clerk, City of Union Township
County Planning Board
NJDEP-Bureau of Water Allocation (Applicable to Well Sealing)
NJDEP-Environmental Claims Administration
Susan C. Karp, Farer Siegal Fersko
R. Yarsinsky, RPCE

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Attachment T



New Jersey

NEW JERSEY 24 HOUR RAINFALL FREQUENCY DATA

Chapter 2 Estimating Runoff and Peak Discharges Part 650 Engineering Field Handbook NJ Supplement

October 2008

County	1 year	2 year	5 year	10 year	25 year	50 year	100 year
Atlantic	2.72	3.31	4.30	5.16	6.46	7.61	8.90
Bergen	2.75	3.33	4.26	5.06	6.25	7.29	8.43
Burlington	2.77	3.36	4.34	5.18	6.45	7.56	8.81
Camden	2.73	3.31	4.25	5.06	6.28	7.33	8.51
Cape May	2.68	3.27	4.24	5.08	6.37	7.50	8.77
Cumberland	2.69	3.27	4.25	5.09	6.37	7.50	8.77
Essex	2.84	3.44	4.40	5.22	6.44	7.50	8.67
Gloucester	2.71	3.29	4.23	5.04	6.27	7.34	8.52
Hudson	2.74	3.31	4.24	5.02	6.18	7.19	8.30
Hunterdon	2.80	3.38	4.26	5.00	6.09	7.02	8.03
Mercer	2.74	3.31	4.23	5.02	6.20	7.21	8.35
Middlesex	2.76	3.35	4.30	5.12	6.36	7.43	8.63
Monmouth	2.79	3.38	4.37	5.23	6.52	7.66	8.93
Morris	2.94	3.54	4.46	5.23	6.36	7.31	8.35
Ocean	2.81	3.42	4.45	5.33	6.68	7.87	9.20
Passaic	2.87	3.47	4.42	5.24	6.45	7.49	8.64
Salem	2.69	3.26	4.20	5.01	6.23	7.29	8.47
Somerset	2.77	3.34	4.25	5.02	6.17	7.16	8.24
Sussex	2.68	3.22	4.02	4.70	5.72	6.60	7.58
Union	2.79	3.38	4.34	5.17	6.41	7.48	8.68
Warren	2.78	3.34	4.18	4.89	5.93	6.83	7.82

Notes: The average point rainfall amounts listed above were developed from data contained in NOAA Atlas 14 Volume 2.